

# European Science and Technology Highlights National Science Foundation Europe Office 2010



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# 1 Europe

## 1.1 United States and European Union Scientific Collaborations Continue

No, the absence of President Barack Obama at the traditional summit "United States and European Union" scheduled next May 25th is not a symbol of weakening bilateral relations. In science, the transatlantic collaborations are not taking on water -- they still have wind in their sails. Researchers are not abandoning ship. Indeed, the flows are increasing.

According to Laurent Bochereau, Minister Counselor of the Science, Technology and Education of the Permanent Delegation of the European Union to the United States, *"the United States and the European Union remain undeniably the premier geographical scientific partners in the world. While the scientific foreign policy of the American Department of State is mainly about the objectives of solidarity with developing countries, the actors are engaged in academic cooperation in research mostly with rich countries. In particular, the U.S. teams continue to be well represented in the 7th Framework Program for Research and Development (FP7) of the European Commission."*

### *United States and European Union, a Preferential but Non-Exclusive Relationship*

Faced with so many new hands outstretched to Uncle Sam, what is the state of the Euro-American scientific couple?

The Euro-American relationship is dominated by economic interdependence. Trade between the EU and the United States represent 40% of the world total. Branches of European multinationals located in the United States will employ nearly 5 million people and spend 20 billion dollars in R&D [1]. On this economic interdependence is superimposed scientific complementarity that is still predominant today.

Articles written by co-authors with U.S. researchers are mostly by European scientists. The United Kingdom ranks first (13.9% of articles internationally co-written), Germany in second place (12.7%), and France in fifth place (8.3%). The hexagon [France] is behind Canada (12%) and China (10.4%) who saw their "knowledge market share" grow spectacularly in ten years (they were only 3.5% in 1998) [2].

In terms of human flows, the nine European countries received a total of 21,405 researchers in institutions of higher education (5,300 German, 4,171 French, Italian 3,548, 2,846 British, 2,481 Spanish, 833 Polish, 766 Greek, 749 Swiss and 711 Swedish) which puts Europe ahead of India (10,814), South Korea (9,975) and Japan (5635). On the other hand, 26,645 Chinese researchers have spent time in 2009 in an American university [3].

EU involvement in the formal scientific collaboration with the United States is not new. The cooperative S&T agreement between the U.S. and the EU started in 1998 and was renewed in 2004 and 2009 [4]. Starting with broad disciplinary fields, it has recently been extended to security and space. Of course, bilateral agreements existed before, although in the background, as the United States continues to fund 85% of their R&D at national level. However, with 53 billion Euros for 2007-2013, the FP7 offers many opportunities to strengthen collaboration with American teams. Using its cooperation component for research projects and Marie Curie funding (the People strand of FP7) are indicators of the intensity of transatlantic cooperation.

### *Mapping transatlantic scientific cooperation: the tip of the iceberg is community*

On March 5th, Laurent Bochereau said at the MS&T: *"clearly, European researchers continue to turn naturally towards the United States as spontaneous employees."* For example, three-quarters of the 330 researchers funded by Marie Curie mobility grants outside the EU (International Outgoing Fellowships scheme), chose the United States as host country.

On the other hand, under the mobility scheme for university staff (IRSES: Incoming International Research Staff Exchange Scheme), which promotes the development of structured partnerships; the United States appear as the first participant country. In his remarks on *"Transatlantic Collaborations: Opportunities and Challenges of the FP7,"* Erryl Levy, EC Liaison Officer for United States cooperation, noted that of the 809 U.S. proposals since 2007, 190 were selected. Thus, the United States has the

success rate in the top third (23.5% vs. 18.5% on average). The most popular themes are health (41 projects), ICT (39 projects), nano and materials science (34 projects), agriculture and biotechnology (31 projects), and environment (26 projects).

Overall, the United States is the top country participating in FP7 with involvement in more than 300 transatlantic projects and exchange programs. However, according to Laurent Bocheau, *"a limit of the database is that it does not include the collaboration at the sub-European level. Therefore it captures only the tip of the iceberg"*, which is mostly made up of more structured partnerships. To obtain a comprehensive picture would require an analysis at the level of member states.

#### *New strategy for 2020: a more detailed mapping is underway*

On Wednesday, February 17th, the European Institute [5] organized a discussion in Washington DC on a new framework for transatlantic partnerships in research, development and innovation. Sigi Gruber, Head of Analysis and Policy Monitoring Research at the European Commission announced *"a new departure in research and innovation."* In September 2010, the Lisbon Treaty, which made the EU a legal entity, will adopt the new 2020 strategy for the EU.

To this end, member states currently collect data on the mapping of developing scientific collaborations across the Atlantic. Regarding France, bilateral cooperation are the major indicators: Chateaubriand Fellowships, Partner University Fund, France-Berkeley Foundation, France-Chicago, MIT-France Foundation and the Alliance with Columbia University. However, collaboration without institutional funding remains undetected by public authorities. Thus, much of the landscape formed by the much scientific transatlantic cooperation remains to be explored.

#### *Sources: March 2010*

- *Electronic Bulletin, March 13, 2010*
- [1] *Report from the European Commission, Towards the European Space for Science, Science, Technology and Innovation, 2007 data*
- [2] *National Science Foundation report - <http://www.nsf.gov/statistics/seind10>*
- [3] *Open doors 2009, report on international exchange, Institute of International Education*
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- *European Commission web site: <http://cordis.europa.eu/fp7/dc/index.cfm>*
- *International Outgoing Fellowships scheme: <http://redirectix.bulletins-electroniques.com/3TKSS>*
- *Incoming International Research Staff Exchange Scheme: <http://redirectix.bulletins-electroniques.com/m7hpl>*
- [5] *European Institute web site: "Shaping European-American Cooperation in the 21st Century": <http://redirectix.bulletins-electroniques.com/KCxpup>*

## **1.2 ICSU releases statement on Universality of Science in the Polar Regions**

### **Universality of Science in the Polar Regions**

The International Polar Year (IPY) 2007-2008 brought together tens of thousands of scientists, educators, and data specialists from more than 60 nations in a two-year internationally coordinated campaign of multidisciplinary polar research and outreach. Sponsored by the International Council for Science (ICSU) and the World Meteorological Organization, IPY demonstrates the enormous value of coordinated international collaboration among present and emerging generations of polar researchers in the biological, geophysical, and social sciences, and of access for researchers to the Antarctic and Arctic. IPY also highlights the value and importance of long-term full and open access to data and information from monitoring and research activities in the polar regions. To build on the international collaborative spirit witnessed during IPY, and for the global population to benefit from the improved understanding of changes and influence of the polar regions that this spirit enables, ICSU calls on all parties conducting or influencing polar research to support the principle of Universality of Science in general, and specifically to support:

1. Continued and responsible access to all areas of the Arctic and Antarctic for research purposes;
2. Full, open, and timely access to polar research data and information for research and educational purposes and for sustainable development of polar regions;



3. continued development of international research capacity, coordination, and collaboration, including sharing of data and information and pooling of national research capabilities;
4. Development of and adherence to policies, procedures, and regulations — and provision of resources — to ensure the long-term effectiveness of the mechanisms that are necessary to deliver 1-3; and
5. Continued recognition among polar scientists of their responsibilities toward sharing and stewardship of data and information.

### Background

Collaboration, sharing, and access are the fundamental building blocks of scientific progress as described in ICSU's core principle of the Universality of Science. This principle embodies freedom of movement, association, expression, and communication for scientists, as well as equitable access to data, information, and research materials. Such freedoms or rights are cherished by the scientific community and have historically been widely recognized by governments and policy makers. For a variety of reasons elaborated below, now is a critical time to re-assert the Universality of Science in the polar regions and to reinforce the application of this principle.

### ICSU Statement ([www.icsu.org](http://www.icsu.org))

The IPY coincided with rapid changes in polar environments and communities, and a reawakening of political and economic interests in these regions. These diverse interests include territorial claims, development of resources, opening of new transport routes, combating pollution, and global action on curbing greenhouse gas emissions. It is now clear that environmental changes in the polar regions are not only indicators of the effects of human activities elsewhere on Earth, but also that these changes will have profound effects on human society around the world if they continue. Observation, understanding, and sustainable management of the polar regions are therefore in the common interest of all humanity. As was the case half a century ago at the end of the International Geophysical Year (IGY), the open conduct of polar science and accessibility of scientific data and results will be a cornerstone of informed progress on the major polar challenges facing the global populace. The IGY of 1957-1958 was a global scientific research campaign involving similarly impressive numbers of scientists and nations as in IPY. In the polar regions, application of the Universality principle has been facilitated by policies, mechanisms, and infrastructure that emerged from the IGY. For example, networks of World Data Centers and Services were established 50 years ago to ensure the long-term availability of scientific data and information. Recognizing the immediate needs and opportunities presented by the IPY in 2007-2008, the 2008 ICSU General Assembly urged its 117 National Members and 30 International Scientific Union Members to support formal stewardship and longterm preservation of IPY data. To promote this, ICSU is fostering the concept of an open polar information commons and is refreshing its approach to data stewardship by building a new, state-of-the-art World Data System.

Dedicated scientific coordinating bodies for Antarctic and oceanic research also arose out of IGY and were subsequently joined by similar groups to coordinate Arctic research<sup>1</sup>. These bodies, which maintain close ties with ICSU and each other, played a vital role in implementing IPY and should be equally important in ensuring its legacy.

If properly supported, these bodies should in turn provide sustained coordination for the interdisciplinary polar research and emerging observation networks that are essential for monitoring, understanding, and managing the polar regions in the long-term. And if all nations embrace the Universality principle and build on progress made during IPY, scientists and society will have at their fingertips the information needed to improve understanding and decisions on the many polar-related issues that now confront humanity. Finally, with these freedoms of access to regions and data come responsibilities for polar scientists including willingness to share data and promote, facilitate, and reward stewardship of data and information. *April 2010*

### About this statement

This statement is endorsed by the Executive Board of the International Council for Science (ICSU) and its Committee on Freedom and Responsibility in the conduct of Science. For more information and ICSU statements, visit the resource centre at: [www.icsu.org](http://www.icsu.org) <sup>1</sup> Scientific Committee on Antarctic Research

(SCAR), Scientific Committee on Oceanic Research (SCOR), and International Arctic Science Committee (IASC).

Sources: May 2010

[http://www.icsu.org/Gestion/img/ICSU\\_DOC\\_DOWNLOAD/3245\\_DD\\_FILE\\_Polar\\_Universality\\_statement.pdf](http://www.icsu.org/Gestion/img/ICSU_DOC_DOWNLOAD/3245_DD_FILE_Polar_Universality_statement.pdf)

### **1.3 Accession: Estonia, Israel and Slovenia to Join OECD (Europe)**

10/05/2010 – OECD countries agreed today to invite Estonia, Israel and Slovenia to become members of the Organization, paving the way for the Organization's membership to grow to 34 countries.

“Estonia, Israel and Slovenia, along with Chile that has just deposited its instrument to become a full member, will contribute to a more plural and open OECD that is playing an increasingly important role in the global economic architecture,” OECD Secretary-General Angel Gurría said.

“This new chapter in the history of the Organization confirms our global vocation as the group of countries that search for answers to the global challenges, and establish standards in many policy fields such as environment, trade, innovation or social issues.”

In statements to a meeting of the Organization's governing Council, OECD countries expressed the wish that membership of the Organization will bring all three future member countries closer to OECD standards in all fields.

During nearly three years of accession negotiations, the three countries were reviewed by 18 OECD Committees with respect to their compliance with OECD standards and benchmarks. “All three countries have been receptive to OECD recommendations on important issues and the membership talks have been constructive and open,” Mr. Gurría said. “The OECD accession process has delivered real policy changes and reform in all candidate countries. Once countries become members, this transformational process continues.”

The invitation to Estonia, Israel and Slovenia to join the OECD acknowledges the efforts already made to reform their economies, including in such areas as combating corruption, protecting intellectual property rights and ensuring high standards of corporate governance, while looking forward to further reforms.

All three countries will contribute to OECD work in a number of specific areas. Estonia is an acknowledged world leader in innovative e-government and e-commerce initiatives. Israel's scientific and technological policies have produced outstanding outcomes on a world scale. Slovenia has led the way in making public sector information available to all. Other OECD countries will benefit from the unique perspectives and policy-making experiences that they can share in these areas and beyond.

Estonia, Israel and Slovenia were invited to open accession talks in 2007, along with Chile and the Russian Federation. Chile became an OECD Member earlier this year and membership talks with Russia are progressing. In parallel, the OECD is strengthening its growing partnership with major emerging economies, including Brazil, China, India, Indonesia and South Africa.

Sources: May 2010

<http://www.oecd.org>

### **1.4 The ERC in Brazil (Europe)**

The European Research Council (ERC) is a European organization created in 2005 to promote basic research (frontier research). Led by a scientific council composed of 22 top European researchers, it has a budget of 7.5 billion Euros to support research within the 7th Framework Plan for Research and Development (FP7). This budget provides grants for both "young researchers" - between 2 and 9 years after their thesis - and established researchers. The funding level is up to 2 M € for young researchers and up to 2.5 M € for established researchers. The use of these funds is flexible: staff, equipment, etc. All research disciplines are involved (from mathematics to social sciences); the competitions are open to most countries including Brazil; the selection is done according to the principle of peer review

committees.

Professor Alain Peyraube is a member of the Scientific Council of the ERC, research director at CNRS and professor of Chinese linguistics at the center of the Ecole des Hautes Etudes en Sciences Sociales (EHESS). Accompanied by Dr. Pascal Dissard, Scientific Officer within the Executive Agency of the ERC (ERCEA), he will present the new structure of the scholarship program from May 11 to 18 at various Brazilian universities. They will visit the cities of São Paulo, Campinas, São Carlos, Brasília, Rio de Janeiro and Porto Alegre.

*For more information on the ERC:* <http://erc.europa.eu>.

*Sources:* May 2010

*ERC web site* May 6, 2010

[http://saopaulo.ambafrance-br.org/spip.php?article489&var\\_recherche=ERC](http://saopaulo.ambafrance-br.org/spip.php?article489&var_recherche=ERC)

### **1.5 Europe, Know Thyself: Social Science Solutions to the Biggest Problems**

*Sources:* May 2010

*Full article available at:*

[http://www.esf.org/media-centre/press-releases/ext-single-news.html?tx\\_ttnews%5Btt\\_news%5D=614&tx\\_ttnews%5BbackPid%5D=13&cHash=3373691f39](http://www.esf.org/media-centre/press-releases/ext-single-news.html?tx_ttnews%5Btt_news%5D=614&tx_ttnews%5BbackPid%5D=13&cHash=3373691f39)

### **1.6 Additional top researchers selected in the European Research Council's second Advanced Grant competition (Europe)**

Thanks to more funds made available, additional researchers have been selected for funding in the second Advanced Grant competition of the European Research Council (ERC). This adds to the prestigious competition's already 236 successful candidates, announced in January. The total budget of this call is around € 515 million.

*Sources:* June 2010

*Full article available at:*

[http://erc.europa.eu/pdf/NewsUpdate\\_AdG2\\_Additional\\_results.pdf](http://erc.europa.eu/pdf/NewsUpdate_AdG2_Additional_results.pdf)

### **1.7 Scientix: The new web-based community for Science Education**

The European Commission has launched Scientix, a new web-portal targeted towards teachers, researchers, policy makers, local actors, parents and anyone interested in science education. Scientix will give access to teaching materials, research results and policy documents from European science education projects financed by the European Union and by various national initiatives. The new platform will facilitate regular dissemination and sharing of news, know-how, and best practices in science education across the European Union.

Máire Geoghegan-Quinn, European Commissioner for Research, Innovation and Science said: *"Scientix will allow every science teacher and student to benefit from excellent teaching materials developed by European and national research projects. So Scientix will contribute both to inspiring young people with science and to maximising value for every euro Europe spends on science education. It will also be a place for everybody interested in science education to exchange news and views."*

The philosophy of the platform can be summarized by the following keywords: **search, find and engage**. The information and services provided cover several dimensions of science education and will attract all kind of actors involved in science education: teachers, researchers, policy makers, local actors, parents, and young people. For teachers for example, Scientix has collected teaching materials from hundreds of European projects and will make them available in all European languages upon request. This new portal is available in six languages: English, French, German, Spanish, Italian and Polish and will give access to the main findings of European science education projects financed by the European Union under the 6th and 7th Framework Programmes for Research and Technological Development (Directorate General Research), the Lifelong Learning Programme (Directorate General Education and Culture) and various national initiatives.

However Scientix is not only a website! Several events and workshops will be organised in the next 3-years. The main event will be the Scientix conference May 6 - 8, 2011, which will promote networking among the science and education community and provide feedback on the services offered online. A monthly newsletter will also be sent out to provide information about updates on the portal. Scientix is carried out by European Schoolnet (EUN) on behalf of the European Commission (DG Research - FP7 Science in Society Programme).

*European Schoolnet (EUN)* is a network of 31 Ministries of Education in Europe and beyond. EUN was created more than 10 years ago with the aim to bring about innovation in teaching and learning to its key stakeholders: Ministries of Education, schools, teachers and researchers.

More information on SCIENTIX - the Community for Science Education in Europe can be found at:

<http://scientix.eu>

Sources: June 2010

[www.europa.eu/rapid](http://www.europa.eu/rapid)

### **1.8 Top researchers fear 'radical shift' in EU policy**

Scientists at Europe's leading research universities have expressed concern over the growing trend towards linking EU funding with pre-defined outcomes. Researchers fear political priorities will curb their scope for creativity and free thinking.

Sources: June 2010

Full article available at:

<http://www.euractiv.com/en/science/top-researchers-fear-radical-shift-in-eu-policy-news-495008>

### **1.9 EU News - Boosting competitiveness and innovation, € 324 million for space and security research**

The European Commission has initiated negotiations to sign research contracts worth EUR 324 million with 108 successful space and security research consortia. They represent strategic domains for the EU's competitiveness and contribute to the implementation of a range of policy objectives, including the fights against terrorism and climate change, and the furthering of sustainable development, industrial renewal, economic recovery, leading to the implementation of the 2020 strategy. As a global actor and major space power, the EU relies on space and security research for strong border protection and enhanced environmental monitoring. Therefore funds also support the continued development of Europe's Global Monitoring system for Environment and Security (GMES).

Sources: June 2010

Full article available at:

<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/716&format=HTML&aged=0&language=EN&guiLanguage=en>

### **1.10 Europeans More Interested in Science than Sport-- Want EU Research Boosted**

According to a new Eurobarometer report published today, nearly 80% of Europeans say they are interested in scientific discoveries and technological developments, compared to 65% interested in sport. Over 70% of Europeans think EU-funded research will become more important in the future. 57% think scientists should put more effort into communicating about their work and 66% believe governments should do more to interest young people in scientific issues. Europeans overwhelmingly recognize the benefits and importance of science but many also express fears over risks from new technologies and the power that knowledge gives to scientists.

Sources: June 2010

Full article available at:

<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/767&format=HTML&aged=0&language=EN&guiLanguage=en>

### 1.11 Erasmus: Record Numbers of UE Students Receive EU Funding for Study Abroad

More students than ever went abroad for studies and company placements with EU support through the Erasmus program in 2008/09. According to new figures released today, almost 200 000 higher education students received grants to study or train abroad. This represents an overall increase of 8.7% on the previous academic year and means that more than two million young Europeans have benefited from Erasmus funding since the program's launch in 1987. The biggest increase is in the number of students going on company placements – up more than 50% on the previous year. In addition, last year more than 36 000 staff from higher education institutions went abroad to teach or receive training in one of the 31 European countries participating in the Erasmus scheme.

Sources: June 2010

Full article available at:

<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/768&format=HTML&aged=0&language=EN&guiLanguage=en>

### 1.12 Erasmus Program Figures Explained

The European Commission today published new figures on the number of students, teachers and other staff in higher education who participated in the EU's Erasmus program in the academic year 2008/2009. The data shows that 198 600 European students and 36 000 staff in higher education received Erasmus funding to go abroad for studies, placements, teaching or training. This memo contains more information about Erasmus in this period, including a breakdown of the figures by country.

Sources: June 2010

Full article available at:

<http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/10/267&format=HTML&aged=0&language=EN&guiLanguage=en>

### 1.13 €6.4 Billion For Smart Growth And Jobs – Europe's Biggest Ever Investment In Research And Innovation

*Commissioner Máire Geoghegan-Quinn announces today (July 19, 2010) nearly € 6.4 billion of European Commission investment in research and innovation. The package, the biggest ever, covers a vast range of scientific disciplines, public policy areas and commercial sectors. This funding will advance scientific boundaries, increase European competitiveness and help solve societal challenges such as climate change, energy and food security, health and an ageing population. Around 16,000 participants from research organizations, universities and industry, including about 3,000 SMEs, will receive funding. Grants will be awarded through "calls for proposals" (invitations to bid) and evaluations over the next 14 months. Many calls will be formally published on 20th July. This package is an economic stimulus expected to create more than 165.000 jobs. It is also a long-term investment in a smarter, sustainable and more inclusive Europe. It is a key element within the EU's Europe 2020 Strategy and in particular the Innovation Union Flagship, which will be launched in autumn 2010.*

Commissioner Geoghegan-Quinn said: "Investment in research and innovation is the only smart and lasting way out of crisis and towards sustainable and socially equitable growth. This European package will contribute to new and better products and services, a more competitive and greener Europe, and a better society with a higher quality of life. We are offering researchers and innovators €6.4 billion for cutting-edge projects focusing on big economic and societal challenges: climate change, energy and food security, health and an ageing population. This is a huge and efficient economic stimulus and an investment in our future."

*More funding than ever before*

There will be an opportunity to bid for funding from the EU's [Seventh Framework Programme](#) across a wide range of policy areas. For example, health gets over €600 million. There is a €1.2 billion boost to Information and Communication Technology (ICT) research, which will help deliver the Commission's commitment in the [Digital Agenda for Europe](#) to maintain the pace of yearly increases in ICT funding.



More than €1.3 billion are reserved for the best creative scientists selected by the [European Research Council](#). Mobility grants for 7, 000 highly qualified researchers will be provided through "[Marie Curie Actions](#)", worth €772 million.

#### *€800 million for SMEs*

Top priority is given to Small and Medium-sized Enterprises (SME), the backbone of the European innovation system, representing 99% of all European businesses. SMEs, will receive close to €800 million and for the first time, there will be ring-fenced budgets in several areas. For example, in health, knowledge-based bio-economy, environment and nanotechnologies SME participation must reach 35 % of the total budget for a number of topics.

#### *New products and services*

Translating research into new technologies, products and services is at the heart of the package.

In [health research](#) alone, around €206 million – one-third of the overall budget for 2011 – will be spent on investigator-driven clinical trials to get new medicines on the market quicker.

In [nanotechnologies](#) (€270 million), the focus will be on research that could lead to patenting and commercialization opportunities.

Around €600 million of ICT funding is earmarked for next generation network and service infrastructures, robotic systems, electronic and photonic components, and digital content technologies. More than €400 million will support research into how ICTs can address challenges such as a lower-carbon economy, an ageing society, and adaptable and sustainable factories. €90 million is also earmarked in 2011 for the [Future internet Public Private Partnership](#) to make key European infrastructures "smart".

#### *New Pilot Open Access For Environment Research Results*

[Environment research](#) projects will get about €205 million. The Commission is introducing this year steps to speed up sharing of environmental research results: beneficiaries of EU grants will commit to making freely available – after a certain embargo period - publications arising from their research.

#### *Background*

The budget for the Seventh Framework Programme calls for proposals in 2011 is €6.4 billion, up 12% in comparison to 2010 (€5.7 billion) and 30% in comparison to 2009 (€4.9 billion).

The Seventh Framework Programme is the largest single research program in the world, with a budget of more than € 50.5 billion, excluding Euratom - for 2007-2013.

By adopting the Europe 2020 strategy, Europe's political leaders have put research and innovation at the top of the European political agenda, making it the cornerstone of investment in sustainable growth and jobs.

The calls for proposals announced today will feed in to Europe's Innovation Union Flagship, which Commissioner Geoghegan-Quinn will launch in autumn 2010. This initiative is central to the Europe 2020 Strategy, and aims to boost the whole innovation chain "from research to retail", by marrying world-class science with an innovation economy or "i-conomy". It will remove bottlenecks which hamper a single market in innovation and which prevent Europe competing as well as it should with the US and others.

It will also introduce "Innovation Partnerships" bringing together the main actors in key areas and aiming to strike the right balance between collaboration and competition.

*Sources: July 2010*

[http://ec.europa.eu/research/fp7/index\\_en.cfm](http://ec.europa.eu/research/fp7/index_en.cfm)

The Commission's website on Research: <http://ec.europa.eu/research/index.cfm>

The Commission's 'Innovation Union' Facebook page: <http://www.facebook.com/innovation.union>

### **1.14 Structural funds 'key to innovation plan' (Europe)**

According to a new survey, the overwhelming majority of innovation experts want EU structural funds to be used to get innovative products and services to the market. As the European Commission readies its new innovation plan, a consensus is also forming around the need to slash bureaucratic procedures and boost venture capital funding. These were the main findings of the General Electric (GE) 'Innovation

Barometer', an independent poll of 240 opinion leaders on EU innovation policies carried out by StrategyOne and unveiled in Brussels yesterday (14 September).

The research, published in conjunction with GE's 'ecomagination challenge' for open collaboration on new technologies, comes ahead of the Commission's 'Innovation Union' strategy to be presented in October. Against the backdrop of the economic crisis and the ensuing loss of millions of jobs, the EU's 'Europe 2020' strategy has set the bloc a series of headline targets focused on smart, sustainable growth and a competitive, green European economy over the next decade. The Commission's Innovation Union plan is one of seven flagship initiatives in Europe 2020 and the barometer respondents are in no doubt about the importance of innovation in the coming years. 90% believe it is the main lever for creating a more competitive and greener economy and 86% see it as the best way to create jobs in the EU.

#### *Structural funds: Cut red tape and be bolder*

91% of the respondents – who included MEPs, Commission officials and business and academic leaders – want the EU to use its structural funds to accelerate the uptake of innovation products and services. Asked what is preventing companies from accessing EU money for the development of innovative business ventures, 88% cited bureaucratic procedures that slow down the absorption of the structural funds. More than 60% also pointed to a lack of expertise on the ground and the inability to come up with matching funds.

It is not only the drawn-out bureaucratic procedures which are hindering innovation, but also competition from "easier" projects, said respondents. Innovative ventures that are perceived as risky and harder to measure in terms of success often lose out, they said. The Commission has earmarked €80 billion for innovation in structural funds, stated a Commission official. Yet one think-tank respondent called for a shift in emphasis from traditional to green business and a focus on innovation in knowledge and education. "How can we do this? Through (e)government and (e)education. These are innovative new solutions for the health and education sectors that help to avoid bureaucratic procedures," they affirmed.

#### *Positions*

EU Research, Innovation and Science Commissioner Maire Geoghegan-Quinn, speaking at the launch, said that the barometer results echoed the Commission's view of the challenges ahead and promised a "raft of bold actions" in the upcoming EU innovation strategy. "We will promote a broad and inclusive view of innovation, including in business models, in management structures and processes, innovation in how the public sector develops and delivers its services, as well as promoting social innovation," she stated.

Geoghegan-Quinn said that the Commission is exploring how structural funds can be better used to support innovation and recognized the need for action on intellectual property. "31% of all patents emanate from the EU and 31.4% from the US – Europeans therefore are clearly great inventors, but we need to become much better at developing these patents into new products and services," she said. "The prohibitive cost and complexity of patenting [in the EU] is a crucial issue for innovation," she added.

Irish MEP Sean Kelly (European People's Party), who hosted the results launch, said that Europe must stop taking the lead from the United States – where venture capital, public-private partnerships and effective regulation have made it the world leader in innovation.

"We need to learn from our American partners and foster an EU which has minimal bureaucracy, favours innovative start-ups, especially in the SME sector, and leverages structural funds to maximum effect to create jobs and growth in the future," he said.

During a panel discussion on the Innovation Barometer, Kelly said invention and innovation often start small before being commercialized globally. "We need to ensure that Europe takes its place at the forefront of innovation, to ensure jobs and prosperity for our continent far into the future," he said.

"The Innovation Barometer points a clear path for policymakers as to how to achieve this goal," Kelly concluded.

**Dr. Tore Land**, director of **GE's ecomagination initiative** in Europe, the Middle East and Africa, said that he is "firmly convinced" that investing in innovation is the answer to the economic challenges facing Europe. GE is currently increasing its research and development spending and recently launched its

€160 million 'ecomagination challenge' to fund and support the emergence of new technologies, he added.

**Hans Martens**, chief executive of the **European Policy Centre (EPC)**, said that it is a case of "innovating or dying" for Europe in the coming years and called for a new innovation culture in the public sector. The EU should play a bigger regulatory role and create incentives to help drive innovation, he stated.

**Patrick Lamot**, representing the **Belgian EU Presidency**, was not optimistic about swift progress on the creation of an EU-wide patent, one of the most significant bottlenecks for innovative products and services in Europe.

The Belgian Presidency is hoping to get consensus on the proposed trilingual patent, he said – but added that the issue "has existed for 50 years" and recalled that the issue was on his country's agenda when it held the EU presidency in 2001.

*Sources: August/September 2010*

*Article published September 15, 2010 on the web site of EurActive.com*

### **1.15 An EU patent without Italy? Member states turn up the heat (Europe)**

Italy found itself in a political squeeze on Thursday (25 November) as several key European countries moved to create a unified patent to protect the design of products sold across their borders. After more than a decade of frustrating negotiations to draft a single patent for the 27-nation bloc, a group of countries have decided to go it alone.

Sweden, Germany, the United Kingdom, Ireland, the Netherlands, Slovenia and Estonia said they will formally ask the European Commission to help them write a common patent agreement based on "enhanced cooperation" between those countries.

More EU member states are welcome to join the pact.

It was a bold and rarely used tactic to pressure Italy to drop its demand that Italian be one of the official languages of an EU patent. Without Italy's vote, the EU Council of Ministers – which represents the bloc's 27 governments – did not have unanimous support behind a proposal for an EU patent that would be translated into English as well as French or German, the three working languages of the Union.

"It's clear we could not reach an agreement in the foreseeable future," said Swedish Minister for Enterprise and Energy Maud Olofsson. "It would be unfortunate for European industry if we didn't use enhanced cooperation" to craft some form of common patent, she added. Europe needs to simplify the process to protect innovative products, reduce costs and create a judicial system to handle disputes. European companies spend 10 times more on patents than their American and Japanese rivals. The single patent is a critical piece of several EU strategies, including the single market and the Innovation Union. "I don't think we can afford the luxury of not growing competitively," said Frenchman Michel Barnier, the EU's commissioner for the internal market and services. He said he would act rapidly on the request for enhanced cooperation on a new patent, and presents a proposal to the Competitiveness Council at its meeting on 10 December.

This would mark only the second time that member states have used the side door of enhanced cooperation to sidestep blocking members. In July, 14 countries – including Italy, Spain, Germany and France - agreed to [simplify divorce rules](#) for couples of different nationalities.

#### ***Italy ready to fight***

This time, however, Italy appears ready to fight any proposal about enhanced competition on patents.

"This is not possible," said Giuseppe Pizza, Italian secretary of state, claiming such action would undermine the internal market of the EU. Surprisingly, Spain is no longer insisting that Spanish also be an official patent language, while Poland took Italy's side and requested another round of negotiations.

France, the Czech Republic and Malta all said they were prepared to explore and analyze a Commission plan for enhanced cooperation on a patent. Such a patent would need the participation of at least nine



member states. It would have to be approved by a qualified majority in the Parliament and the Council, but only participating members would be allowed to vote in Council, according to legal staff. "It's high time for those who wish to move forward with a higher form of cooperation to do so," said Peter Hintze, a German secretary of state. "The world is changing so quickly and the speed of change is accelerating. We cannot wait."

*Sources: November 2010*

*www.EurActive.com - Published: 26 November 2010*

### **1.16 ERC grantee wins L'Oréal-UNESCO Award for Women in Science**

French researcher and ERC grant holder Professor Anne L'Huillier has won one of the five 2011 L'Oréal-UNESCO Awards for Women in Science, which was announced by the jury on November 9, 2010.

Five outstanding women scientists, one per continent, are honored each year "for the contributions of their research, the strength of their commitments and their impact on society". This year's laureates were selected in the Physical Sciences domain; Professor L'Huillier received the award for the European continent.

L'Huillier is a professor of Atomic physics at Lund University in Sweden, and is currently conducting research on attosecond control of light and matter (one attosecond is a billionth of a billionth of a second) supported by an ERC Advanced Grant that she obtained in 2008.

She was awarded the L'Oréal-UNESCO prize for her work developing the fastest camera recording events in attoseconds. The award ceremony will take place on March 3, 2011, at the UNESCO Headquarters in Paris. Each laureate will receive \$100,000 in recognition of her contribution to science.

*Sources: November 2010*

[http://erc.europa.eu/pdf/ERC\\_grantee\\_wins\\_LOREAL-UNESCO\\_award.pdf](http://erc.europa.eu/pdf/ERC_grantee_wins_LOREAL-UNESCO_award.pdf)

### **1.17 EU's Marie Curie program funds its 50000th researcher**

The European Union's Marie Curie Actions program, which provides funding for some of the world's best young researchers, celebrates a special milestone today with a conference in Brussels to mark its 50 000th beneficiary. The event was opened by European Commission President José Manuel Barroso, together with European Parliament President Jerzy Buzek and Commissioner Androulla Vassiliou, who has overall responsibility for the Marie Curie program. Since its launch in 1996, the Marie Curie program has supported training for researchers of 100 different nationalities working in 70 countries.

*Sources: December 2010*

*Full article available at:*

<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/1690&format=HTML&aged=0&language=en&guiLanguage=en>

### **1.18 It's time for Europe to step up research in the Polar Regions**

Brussels, 7 December 2010 – Polar research must become an integral part of the European Union's research activities if Europe is to benefit from the dramatically changing face of the Polar Regions, the European Polar Board (EPB) said today at the launch of its strategic position paper on European polar research: "Relevance, Strategic Context and Setting Future Directions."

European research activities in the Polar Regions are significant, amounting to over 300 million euro per year in recognition of the regions' key role as driver of the Earth's climate and the functioning of the oceans. But this research is often fragmented with considerable overlap between the various participating nations within Europe.

To remedy the situation, the position paper calls for mainstreaming polar research into the European Research Area so that it becomes a priority within both the upcoming 8th R&D Framework Programme from the European Commission and polar funding agencies at national level in EU member states. It also

urges increased links with international partners to preserve the Polar Regions so that research can help answer global scientific questions affecting the dynamic Earth system itself.

"We need an ambitious and broad strategy for investment in research activities in the Polar Regions for the long-term benefit of Europe," said Professor Carlo Alberto Ricci, Chairman of the European Polar Board. "This approach will also serve to increase the weight of European science within the international polar science effort," he added.

The overlap of European spending and resource allocation will become more critical as climate change dramatically increases accessibility of the Polar Regions and opens up enormous new opportunities in fisheries, tourism, oil, gas and transport. The position paper therefore urges a special effort notably to coordinate European research activities in Antarctica, through common programs, shared resources and networking of scientific stations, and other facilities and infrastructures.

The European Polar Board (EPB) is Europe's strategic advisory body on science policy for the Polar Regions of Arctic and Antarctica. Established in 1995, it is a platform for European engagement in international science programs and provides strategic science policy advice to the European Commission and international bodies. It acts as a voice and high-level facilitator for cooperation among national funding agencies, national polar institutes and research organizations. Its members are the national operators and research institutes in 20 countries. <http://www.esf.org/research-areas/polar-sciences.html>

*Sources: December 2010*

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### **1.19 The European Commission has set up a Task Force to explore options for the future of the European Research Council (ERC).**

The Task Force is chaired by the Director General of DG Research, Robert-Jan Smits. This follows nearly four years of successful work by the ERC since it was established by the Commission in 2007.

*Sources: December 2010*

*Full article available at:*

<http://europa.eu/rapid/pressReleasesAction.do?reference=IP/10/1759&format=HTML&aged=0&language=en&guiLanguage=en>

## **2 Austria**

### **2.1 The French National Agency for Research (ANR) announces its "White Program" (Austria)**

The White Program (open call) of the French National Agency for Research (ANR) and its international component are designed to give significant impetus to ambitious, original, internationally competitive scientific projects that go beyond traditional research approaches.

In setting up calls for transnational projects that target specific collaborations with in strategic areas, ANR allows French researchers to initiate or deepen their cooperation, with the goal of developing European and international excellence. To facilitate and encourage the installation, implementation, and financing of bilateral transnational projects proposed by French and Austrian teams, the ANR has concluded cooperative agreements with its Austrian counterpart, the Fonds zur Förderung der Wissenschaftlichen Forschung (FWF).

All fields of science and technology are eligible under this call for proposals, but priority will be given to projects within the thematic areas of physics, chemistry, and mathematics. The amounts can range from 150,000 to 400,000 Euros or more depending on the project.

Austrian partners prepare a common proposal with their French partners that they will submit in parallel respectively to the FWF and ANR before April 15.

=> Calendar:

- Closing call ANR: April 15, 2010
- Closing call FWF: April 15, 2010
- Joint decision ANR / FWF and publication of results: November 2010
- Project start: January 2011

*Sources: February 2010*

- *Electronic Bulletin, February 15, 2010*
- *Dr. Reinhard Belocky - Email: [reinhard.belocky@fwf.ac.at](mailto:reinhard.belocky@fwf.ac.at) - Phone: +43 5056740 8701*
- *Dr. Christoph Bärenreuter - Email: [christoph.baerenreuter@fwf.ac.at](mailto:christoph.baerenreuter@fwf.ac.at) - Phone: +43 5056740*
- *Julien Bouasria, in charge of the Scientific and University mission - Phone: +43 150 275 324, fax : +43 150 275 397 - Email: [sciences@institutfr.at](mailto:sciences@institutfr.at)*
- *ANR web site: [www.anr.fr](http://www.anr.fr)*

## **2.2 Interdisciplinary Center of French Studies at the University of Innsbruck (Austria)**

The Interdisciplinary Center of French Studies at the University of Innsbruck was founded in 2001 and is the result of internationalization and the desire for scientific cooperation with France. Its purpose is to promote scientific cooperation and academic exchanges between universities and schools in France and the University of Innsbruck.

The French Republic and the University of Innsbruck participate annually in the budget of the center which allows travel and subsistence reimbursement for University of Innsbruck French researchers, by invitation from their Austrian colleagues, for joint research. Reciprocal stays for Austrian researchers and teachers are also promoted.

The center's primary mission is to distribute grants. It supports bilateral research projects from all faculties and all disciplines, as well as organizing conferences and participating in seminars. Generally, the center covers travel and lodging for researchers, but it also participates in a ways to finance other activities.

Additional information is available on the website of Interdisciplinary Center for French Studies at the University of Innsbruck: <http://www.uibk.ac.at/frankreichschwerpunkt/>

*Sources: February 2010*

- *Electronic Bulletin, February 15, 2010*
- *Interdisciplinary Center for French Studies at the University Leopold Franzens of Innsbruck - Herzog-Friedrich-Straße 3, 6020 Innsbruck - email: [france-focus@uibk.ac.at](mailto:france-focus@uibk.ac.at) - Phone: +43-(0) 512 507 4203, fax: +43-(0) 512 507 9087 - web: <http://www.uibk.ac.at/frankreichschwerpunkt/>*

## **2.3 Emerging Projects Networks (Austria)**

*"The greatest power of man lies in diversity"*

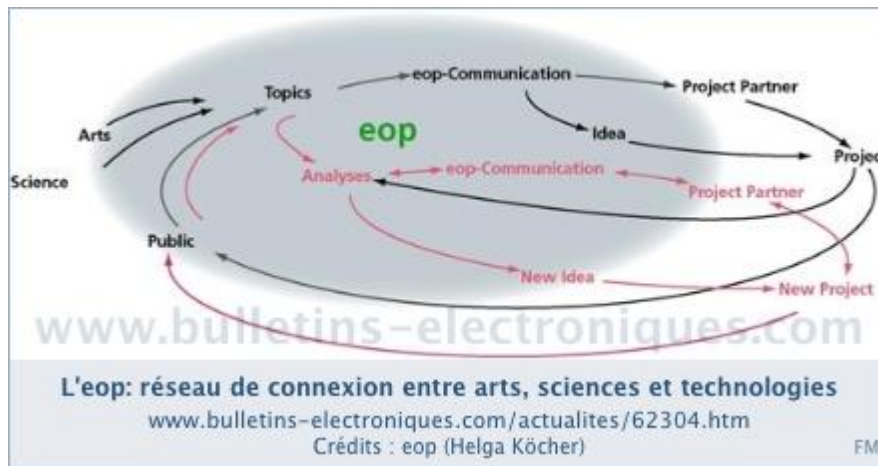
### **1. What is the EOP?**

The EOP is an interdisciplinary network founded in 2003 by Helda Köcher. On January 17, 2003, twenty-four interested and interesting people met in the lounge of the Essl Museum in Klosterneuburg. Since then, men and women from different fields of art, science and culture meet to discuss their projects, build cooperation, and develop the network.

### **2. What kinds of projects are appropriate for EOP?**

EOP network projects are different and correspond not only to the interests and areas of expertise of its members but also to their role in art and science as students, artists, etc. Thus, projects issued from the work of the EOP have structurally different characters. Broadly, there are three kinds of projects:

#### **2.1 EOP Projects**



One or more members of the EOP present their idea for a project in the EOP forum, opening opportunities for cooperation with other group members. If the project is the interest of other members wishing to participate, a group project can then be created and become an "EOP Project". For the launch phase of the project, EOP centers of competence are available.

## 2.2. Projects "powered by EOP"

Several participants in the EOP network take in hand a newborn multidisciplinary project and develop it through their support and contacts for greater dynamics and better quality.

## 2.3. Projects from EOP

These are projects that people have learned in the context of EOP and through the EOP intensified their contacts. Here, managers decide on the project but should keep from informing the mailing list and the EOP forum about the project. If the project is to be realized, it must bear the credit of the EOP.

## 3. Who are the partners of EOP?

The partners of EOP are individuals and groups who feel involved in supporting the activities of the EOP. Thus, the list of partners brings together people who:

- Support the EOP through infrastructure, know-how, contacts and information
- Allow the realization of EOP projects (as sponsors)
- Participate in EOP projects
- Are in an artistic or scientific exchange with EOP

The EOP is open to international cooperation, particularly with France. So do not hesitate to contact the manager, Helga Müller (email: [helga.koecher@chello.at](mailto:helga.koecher@chello.at)) for any request for additional information and project proposal.

Sources: February 2010

- Electronic Bulletin, February 15, 2010

- <http://www.eop.at>

- EOP's responsible: Helga Köcher - email: [helga.koecher@chello.at](mailto:helga.koecher@chello.at)

## 2.4 The European Research Council has identified seven Austrians to obtain this year the "Advanced Grants"

The Austrian result in Advanced Grants from the European Research Council (ERC) continues to be a success

It hasn't been yet three years since the ERC began its work. But after this short period, it already hints that this new agency to support basic research excellence in Europe should be a success. In all cases, the scientific community is already completely seduced.

In particular, the ERC should reduce the delay with the United States, where cutting-edge research from around the world feels like home, and in particular types of basic research called "risky" that ultimately generate the greatest innovations.

The hard core of the ERC are the following funding awards:

- "Starting Grant" funding projects to outstanding young researchers.

- "Advanced Grant": finance international renowned researchers.

The award "Advanced Grant" ERC is very comparable with the Likelihood "Wittgenstein-Preis", the highest decoration (and at the same time funding) for the best researchers in Austria: "Preisgelder" which usually exceeds one million Euros must be shared in research projects of several years.

Regarding the current second round of the Advanced Grant, about 1,600 researchers from across Europe were candidates, including about 40 from Austria. Last year, Austrian 8 were selected. Here is the list of the 7 Austrian selected this year:

- Philosopher Pauer-Studer (Uni Wien)
- Evolutionary biologist Nick Barton (IST Austria)
- Cell biologist Jürgen Knoblich (IMBA)
- Medical physicist Monika Ritsch-Marte (Innsbruck Uni-Med)
- Mathematician Walter Schachermayer (Uni Wien)
- Micro-electronician Siegfried Selberherr (TU Wien)
- Molecular biologist Giulio Superti-Furga (BMOC-Academy of Sciences)

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*The European Research Council (ERC) has named Professor Nick Barton of the Austrian Institute of Science and Technology (IST) as a beneficiary of an ERC Advanced Grant for 2009. The project title is "Limits to selection in biology and evolutionary computation", and some components of the project will require new ideas from the interface between population genetics and informatics. The amount awarded is 1.97 million Euros to finance two doctoral students and three postdoctoral researchers over a period of five years. The President Henzinger congratulated Professor Barton and expressed his satisfaction: "international prizes as these confirm our recruitment process".*

*Sources: February 2010*

*- Electronic Bulletin, February 15, 2010*

*- <http://www.erc.europa.eu>*

## 2.5 Austria Sets Research Policy Priorities

"Science and research are the engines of innovation and jobs of the future can be found where there is knowledge. In short: knowledge supports work" said the new Austrian Minister for Science and Research (BMWf), Mrs. Beatrix Karl. Under the system of ecological taxes provided by the Minister of Finance and Conservative Vice-Chancellor (OeVP) Joseph Pröll, Austrian research will be supplemented by € 100 million annually, beginning in 2011. In a joint press conference on April 15, 2010 with the President of the Conference of Universities of Applied Sciences (Fachhochschule - FH) Werner Jungwirth, the President of the National Agency for Basic Research (Wissenschaftsfonds - FWF) Christoph Kratky and the President of the Conference of Universities Hans Sunkel, Minister Karl announced that new resources should be soon implemented to support excellence in basic research, development in transfer of knowledge from research to industry, and development of training areas of excellence.

*Exzellenzcluster* is a cluster with international visibility focusing on high-level networking and qualified scientists. This program has been requested for years by the FWF and will, if effectively implemented, be managed by this institution. Specifically, it should allow the establishment of five clusters for basic research, divided into two broad categories:

- € 10 to 12 million per year for two major themes: quantum optics and microbiology.
- € 6 to 8 million for three themes: mathematics, social studies, and "brain circulation" (specifically designed for the reception of young foreign researchers in Austria).

According to the President of the Wissenschaftsfonds (FWF) Christoph Kratky, the program aims to build in a sustainable manner in Austria basic research centers of high level international visibility. Also according to Kratky, basic research of excellence does not only set the foundation for development of innovations. The basic research of excellence is the most effective way to strengthen and expand the human capital of a country in the higher levels of qualification, says Kratky.

*Enhancing knowledge transfer between science and industry.* "The development of new ideas into innovative products is the basis of the competitiveness of enterprises" says Minister Karl. "To remain



competitive and create new jobs, we need researchers and entrepreneurs. Between an idea and a new product, however, there are many steps that do not fall under the jurisdiction of researchers nor the competence of firms. Therefore, the creation of new centers of specific knowledge transfer will fulfill this important function.

*Increase size of the Fachhochschule (FH).* The Minister for Science and Research Beatrix Karl wants to increase the number of researchers in the FH, in particular in the fields of economy and industry and foremost among them the technical and information technology. Since their creation in the 1990s, the FH have been a great success and are seen as engines of innovation. The proposed increases must meet the needs of regions and the demand for skilled labor.

*Sources: May 2010*

*Electronic Bulletin, May 3, 2010*

*Press release (in German) from the Federal Ministry for Science and Research (BMWF) April 15, 2010: <http://redirectix.bulletins-electroniques.com/llvY4>*

## **2.6 Minister of Science Applauds Austria's European Innovation Scoreboard Ranking**

The Minister for Science and Research (BMWF), Beatrix Karl, confirms that the research institutes and universities make an important contribution to innovation. She is satisfied with the performance of Austria in the 2009 European Innovation Scoreboard recently released by the European Commission [1]. Austria has managed to retain its 6th place ranking and the Minister sees this as confirmation of the success of the Austrian innovation policy [2]. At the same time, this result is an *"incentive and motivation to become even better"*.

*"Universities and research institutions make a significant contribution to innovation in our country,"* says the Minister, adding that *"in years to come, we must strengthen existing collaborations. The Federal Government's targeted investments in research and development are confirmed by the European Innovation Scoreboard"*, says Karl. *"Now, we must reinforce the federal strategy on research, development and innovation to build an Austrian science, economics and innovation. With science and research, we ensure our competitiveness and our employment pool. It is time to put together the turbo on innovation"* Karl ends.

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[2] The 2009 European Innovation Scoreboard, in which Austria is in 6th place, compares the innovation performance of European countries according to 29 independent indicators including, among others, availability of highly skilled human capital, investment in research and development (R&D) and innovation, the innovation activities of enterprises and innovative economic structures. The advantages of Austria in this classification are shown by the indicators related to business, as the share of innovative firms, intellectual property rights and the level of investment in R&D while the weaknesses are the lack of highly qualified and venture capital. This ranking confirms the assessment of the Austrian system of research and innovation that is characterized by high investment (2.73% of GDP in 2009) but results need improvement ("output, outcome, impact").

*Sources: May 2010*

*Electronic Bulletin, May 3, 2010*

*[1] European Innovation Scoreboard: <http://www.eis.eu>*

*Press release (in German) from the Federal Ministry for Science and Research (BMWF) March 16, 2010: <http://redirectix.bulletins-electroniques.com/HA56X>*

## **2.7 The ERASMUS MUNDUS: Europe Awaits You! (Austria)**

*European Mobility:* Fuelled by economic globalization, international mobility is now a major concern for companies, driven either indirectly to conduct a part of their business outside their national territory. It is important both for the employees and among students, for whom international experience is an essential step in a career. Today international mobility has become complex with the evolution of this reality.

Nevertheless, geographical mobility is essential today. This is why 23 years ago Europe created the famous Erasmus Exchange Program, of which France is the 2nd most popular destination for Austrian students, after Spain. In September 2010, the European Union will give an extra dimension to mobility in Europe with the launch of the new [Erasmus Mundus program](#).

*Erasmus Mundus* aims to improve the quality of European higher education and to strengthen

intercultural understanding. The program encourages and supports the mobility of people and cooperation between European and non-European institutions. The objective: developing worldwide awareness of the European Union as an area of academic excellence, contributing to sustainable development in higher education, and offering students the best career prospects. The program has a budget of 950 million Euros for 2009-2013. The program will start at the beginning of September 2010, offering 116 courses at the masters' level and 13 doctoral programs in multiple disciplines (please note the call for applications for the 2010-2011 academic year has been closed since April 30, 2010). The characteristics of ERASMUS MUNDUS can be translated as following:

- Training in at least two different countries.
- Double (two countries), multiple (more than two), or joint (common to all partners) degrees.
- Multicultural, multilingual environment, centered on students, with PhD students and teachers trained in the best universities in the world.
- Possibility of obtaining an Erasmus Mundus grant.
- Masters and doctorates open to all, whether French, European, or non-European.
- All courses have been selected for their scientific and academic quality by the European Commission.

*For more information (ranking courses by subject, selection criteria and awards), go to the website of the European Commission:*

[http://eacea.ec.europa.eu/erasmus\\_mundus/results\\_compendia/selected\\_projects\\_en.php](http://eacea.ec.europa.eu/erasmus_mundus/results_compendia/selected_projects_en.php)

*Sources: August/September 2010*

*Electronic Bulletin, September 9, 2010*

<http://www.emabg.eu>

<http://www.emle.org>

<http://www.europeanforestry.net>

<http://www.uni-leipzig.de/gesi/emgs>

<http://www.icephd.org>

## **2.8 The winners of the Austrian ERC Grant**

The European Research Council was created in 2007 by the European Union. This is the first European organization to support basic research projects on the sole criterion of scientific excellence of a researcher and strength of its innovative idea, regardless of nationality, age or area of research (1000 funded researchers across Europe since 2007). The ERC operates the program "*Ideas*", one of the four components of the 7th European Research Framework Programme (FP7).

So each year, the European Research Council awards large research grants (EUR 7.5 billion overall budget for 2007-2013) to early-career scientists ("*ERC Starting grants*"), or to experienced scientists in their fields ("*ERC advanced grants*"). Researchers must respond to calls for proposals published by the ERC and be registered at a university, research center or a private laboratory, located in one of the 27 member countries of the EU or in one of countries associated to the FP7.

### *A very respectable record*

In this area, Austria has 31 awards from the largest public research infrastructure of the country (universities, IMBA, IST Austria, CeMM, IMP, IIASA, AIT, WWTF) in the fields of life sciences, physical sciences and engineering, humanities and social sciences and supporting actions (an average of 7.75 candidates per year in both categories).

### *661 million Euros for the next "ERC Starting Grant"*

The European Research Council announced its fifth call for "ERC Starting Grant" projects open to young researchers of all nationalities working or going to work in European institutions. The total budget for this call is about 661 million Euros, representing an increase of 25% over the previous year. Thus, the budget allocated to young researchers is equivalent to that allocated for established researchers ("ERC Advanced Grants"). This call is addressed to young researchers and postdoctoral researchers (between 2

and 12 years) in all fields of research, social, life and physical sciences. The deadlines are planned for autumn 2010.

Sources: August/September 2010

- Electronic Bulletin, September 9, 2010

- <http://erc.europa.eu/index.cfm>

- FFG Web page listing to the ERC winners: [http://rp7.ffg.at/ausschreibungen\\_2010](http://rp7.ffg.at/ausschreibungen_2010)

- Kukhwan Mieusset-Kang (contact for the ERC at FFG) - Phone: +43-(0) 577 554 607 - Email: [kukhwan.mieusset@ffg.at](mailto:kukhwan.mieusset@ffg.at)

## 2.9 Cluster Policy in Austria

### 1. Definition

Clusters are networks of producers, suppliers, research institutions (universities, schools), and service suppliers (consulting and management offices) geographically close to each other and whose activities are complementary or equivalent. The concept of clusters is based on the idea of increasing the capacity for innovation and developing key competencies of partner companies concentrating skills and potential through cooperation, increasing international competitiveness.

### 2. Initiatives "cluster" in Austria

In Austria, clusters have grown successfully since 1991. There are currently more than 60 initiatives "cluster". Clusters are associated, institutionally and in practice, in many areas of economic policy. This integration is still very diffuse: the orientation of the Austrian economic policy taking place largely in effect in each province. The largest number of cluster initiatives is found in the province of Vienna (13), Upper Austria (12) and Tyrol (10). The provinces of Lower Austria, Salzburg and Styria each have 6 clusters. Carinthia hosts 2 clusters, as does the province of Burgenland.

The areas most represented are "primary matters and materials" (9 clusters) and the "renewable energy and environment" (8). The industry for automotive, railway, transport, aviation and aerospace holds 7 clusters across Austria, including 5 for the sole province of Vienna. The sector "wood, furniture, housing and housing construction" has 7 clusters, including 3 in the province of Vorarlberg. The domain of "health, life sciences" has 7 clusters, as does the sector "mechatronics, electronics, computers, sensor technology". The domain of welfare counts 4 and the food industry 6. The domain of design and multimedia has 4 when 6 belong to the category "process and logistics". Finally, there are 2 clusters in the field of human resources.

### 3. Challenges for clusters in Austria

Competition from other European countries and the current economic crisis are new challenges for clusters. For example, in May 2009, "ACStyria" which had about 46,000 employees before the crisis, lost 2,000. Thus, given the changing economic situation, the need for better coordination and cooperation is essential. It represents a challenge for the Austrian cluster initiatives that continue to be developed and implemented at the state level.

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NB: a full report prepared by the Economic Mission UBIFRANCE Vienna in Austria on cluster policy in Austria is available on request. Contact directly the economics department at: [vienne@ubifrance.fr](mailto:vienne@ubifrance.fr)

Sources: October 2010

Electronic Bulletin, October 19, 2010

Economic Mission of Vienna in Austria – email: [vienne@ubifrance.fr](mailto:vienne@ubifrance.fr) - web: <http://www.ubifrance.fr>

## 2.10 Five Austrian researchers awarded the “L’Oreal For Women In Science Price”

On October 5th, the Minister for Research and Higher Education, Dr. Beatrix Karl, presided over the awards ceremony of the “Austria L’Oreal For Women in Science” [1] held at the Academy of Sciences in Vienna.

Four young women researchers received the award:



- **Dr. Nina Gratz** a biologist specializing in immunology of the University of Vienna,
- **Dr. Petra Luschnig**, a pharmacologist also specializes in immunology from the Medical University of Graz,
- The engineer biophysicist **Martina Rangl** of the University of Linz,
- **Dr. Cornelia Schrauf**, behavioral biologist at the University of Vienna.

These grants will support research projects of young scientists and the development of their scientific career. The projects selected in 2010, recognize basic research in life sciences such as understanding of the immune defense system and development of allergies, the operation of the permeability of the cell membrane, and finally the influence of sex hormones on behavior primates.

The awards program Austria L'Oreal was implemented in 2007 through cooperation between the Austrian Commission for UNESCO and the Austrian Academy of Sciences. The Austrian Ministry of Research and Higher Education (BMWF) cofinance the program through the national program fFORTE (Frauen in Forschung und Technologie) [2]. The program is open to all disciplines of sciences and the selection is organized by a committee of experts from the Austrian Academy of Sciences as well as international experts.

The goal of "For Women in Science", created in 1998 in cooperation with UNESCO, now active in 45 countries, is to develop women's participation in the research world through direct support of promising young scientists and by action of communicating the importance of research as well as the role of women scientists. Finally, this initiative should also help changing the face of science by giving it a feminine feature!

*Sources: October 2010*

- *Electronic Bulletin, October 19, 2010*

- [1] "FOR WOMEN IN SCIENCE" - Dr. Alexandra Piffl, Austria L'Oréal- email: [apiffl@at.loreal.com](mailto:apiffl@at.loreal.com) - web: <http://www.forwomeninscience.org>

- [2] fFORTE (Frauen in Forschung und Technologie) - web: <http://www.fforte.at/>

### 3 Belgium

#### 3.1 The Free University of Brussels Launches "Words of Researchers" Podcasts (Belgium)

"Words of Researchers" is a research podcast from the Free University of Brussels (ULB) launched March 31, 2010. Every other week, a researcher will present his work in the format of a conversation with a scientific journalist, all in about ten minutes, with simple words that get to the heart of the research and explain the practical prospects of the research.

All topics of sciences and social sciences will be discussed; the ULB counts about 3,500 researchers in nearly 500 research areas.

*Sources: May 2010*

*Electronic Bulletins, May 18, 2010*

<http://www.ulb.ac.be/actulb/podcast.php>

Nathalie Gobbe, Research Communication -Department of External Relations at ULB - Phone: +32 (0)71 60 02 06 - Email: [ngobbe@ulb.ac.be](mailto:ngobbe@ulb.ac.be) ; [com.recherche@ulb.ac.be](mailto:com.recherche@ulb.ac.be)

#### 3.2 Lab'InSight Connects Academic Labs and Innovative Companies (Belgium)

The ambition of "Lab'InSight" is to open the doors of laboratories and propose innovative projects.

*What is "Lab'InSight"?* For a half-day a university laboratory hosts companies interested in a topic (last March 9 at Giga, for example, it was biotechnology), displays its competencies and equipment and arranges meetings with researchers. The package is designed for an audience of entrepreneurs. Fact sheets and video reports are made available to companies and consultancies are always available after

the meeting.

This new initiative is the result of the LIEU (Liaisons between business and university) network and SPOW (Science Parks of Wallonia). It aims at fostering and expanding a dynamic of continuous exchange between the actors engaged in a process of technological innovation.

Next Lab'InSight:

- June 3 at the Catholic University of Leuven - UCL: "Conditioning Materials."
- November 9 at the University of Liege - ULg: "Conservation of Refrigerated Foods".
- January 27, 2011 at the University of Mons (Wallonia) UMons: "Food Packaging".

*Sources: May 2010*

*Electronic Bulletins, May 18, 2010*

*Interface Entreprises-ULg - Phone+ 32 (0) 478 30 64 43 - Email : [f.hocquet@ulg.ac.be](mailto:f.hocquet@ulg.ac.be) - <http://www.labinsight.be>*

### **3.3 New Center for Microscopy and Molecular Imaging at Biopark Charleroi-Brussels South (Belgium)**

Officials of the Academy University of Wallonia-Brussels recently unveiled plans for the proposed Center for Microscopy and Molecular Imaging (CMMI) on the research campus in Gosselies (Charleroi) which is to be completed in 2011. They were joined by the Belgian Minister of Scientific Research, Jean-Marc Nollet, and the representative of the Minister-President of the Walloon Region and French Community Rudy Demotte.

The Center will provide a medical imaging device, unique in Belgium, with a range from the molecular level to that of a small animal. Its will support scientific research and respond to requests from biomedical or health businesses.

The project budget is 15 million Euros. The CMMI is supported by the European Union (Funds Feder Convergence) and the Walloon Region. It will integrate the Biopark already present on the research campus in Gosselies. It will be an annex of the Institute of Medical Immunology (IMI).

*Sources: May 2010*

*Electronic Bulletins, May 18, 2010*

*Magali Carlier, International Communication and Relations - Academy University of Wallonia-Brussels, Parentville Campus, Rue de Villers 227, 6010 Charleroi - Belgium - Phone: +32 (0)71 60 02 09 / +32 (0)2 650 92 09 - Email : [mcarlier@acadŽmiewb.be](mailto:mcarlier@acadŽmiewb.be)*

### **3.4 Belgian Presidency to put spotlight on innovation**

The incoming Belgian EU Presidency plans to devote the autumn European summit to innovation policy, but a long-awaited report by President Van Rompuy on economic governance is set to overshadow long-term strategies.

EU leaders are due to debate a new 'Research and Innovation Plan' when they meet in Brussels in the autumn, with the focus likely to be on intellectual property, research funding, public procurement and innovation infrastructure.

The final version of the plan is due to be approved at a subsequent summit in December, leaving ample time for national industry and research ministers to flesh out the Commission's proposal in detail. It will be the first time an EU summit has been earmarked for innovation policy, but ongoing instability in the euro zone could relegate the issue to the bottom of the agenda – just as the Greek debt crisis took the spotlight off the 'Europe 2020' jobs strategy at the Spanish Presidency's spring summit. Intensive work on the strategy has been ongoing since Research and Innovation Commissioner Majire Geoghegan-Quinn took office in January, with research ministers urging the EU executive to prioritize the question of how innovation is financed.

### *Restoring competitiveness top priority*

Belgium is part of a 'trio' of EU nations which run the agenda of ministerial meetings over an 18-month period. In line with a program agreed with Spain and Hungary, Belgium is making competitiveness a key priority of its tenure. Progress on a European patent and completion of the internal market based on a report by former EU Commissioner Mario Monti will be at the centre of their efforts. So too will the focus on revamping industrial policy. Linking the 'Europe 2020' growth strategy with developing lead markets and tackling counterfeiting are listed as priority areas by the trio and Belgium will be expected to drive ahead on these issues.

R&D will come into sharp focus at the autumn summit as member states are due to sign off on individual national targets for research spending. The European Commission wants governments to spend an average of 3% of GDP on R&D, but advanced member states will face higher targets than those with traditionally lower levels of investment.

Diplomatic sources say governments have insisted that there will be no "burden sharing" element to hitting the Commission's proposed Community target of 3% - meaning the average of the national targets could ultimately come in below the 3% mark.

### *Will Van Rompuy's task force steal limelight?*

Despite the insistence that innovation will be the cornerstone of political debate in the autumn, question marks remain over leaders' ability to focus on longer-term goals. EU President Herman Van Rompuy is due to present the findings of his task force on economic governance at the autumn summit, which will inevitably grab the headlines in October. Just as the Spanish Presidency's farewell summit last week (17 June) saw leaders rubber-stamp the 'Europe 2020' plan while devoting much of their energy to pressing economic reforms, the Belgians may have a fight on their hands if they want innovation to top the agenda at the next summit.

*Sources: June 2010*

*Published: 22 June 2010 | Updated: 23 June 2010*

*Additional information available at:*

[www.euractiv.com](http://www.euractiv.com)

## **3.5 EU patent to make or break Belgian Presidency**

Language and legal disputes have prevented several EU presidencies from creating a Community patent. Now Belgium, known for its own linguistic problems, has vowed it will try to resolve the issue during its own stint at the EU's helm.

*Sources: June 2010*

*Full article available at:*

[http://www.euractiv.com/en/euro/eu-patent-make-or-break-belgian-presidency-news-495567?utm\\_source=EurActiv+Newsletter&utm\\_campaign=b63c542287-my\\_google\\_analytics\\_key&utm\\_medium=email](http://www.euractiv.com/en/euro/eu-patent-make-or-break-belgian-presidency-news-495567?utm_source=EurActiv+Newsletter&utm_campaign=b63c542287-my_google_analytics_key&utm_medium=email)

## **3.6 Belgium pledges sustainable EU Presidency**

Belgium wants to lead by example during its upcoming EU presidency and has pledged to minimize the environmental impact of the numerous meetings and summits planned over the next six months.

*Sources: June 2010*

*Full article available at:*

[http://www.euractiv.com/en/sustainability/belgium-pledges-sustainable-eu-presidency-news-495568?utm\\_source=EurActiv+Newsletter&utm\\_campaign=a8c8a2ddbc-my\\_google\\_analytics\\_key&utm\\_medium=email](http://www.euractiv.com/en/sustainability/belgium-pledges-sustainable-eu-presidency-news-495568?utm_source=EurActiv+Newsletter&utm_campaign=a8c8a2ddbc-my_google_analytics_key&utm_medium=email)

### **3.7 ICT research: Brussels showcase for intelligent robots, green homes, virtual reality and much more**

More than 100 groundbreaking information and communication technology (ICT) research projects funded by the EU are being showcased at [the "ICT 2010-Digitally Driven"](#) conference and exhibition in Brussels Expo from 27 to 29 September. The event, organized every two years by the European Commission and this year hosted by the Belgian Presidency of the EU's Council of Ministers, brings together researchers, businesses and policy makers to show the latest ICT advances. Major themes this year are research for sustainable growth in a low-carbon economy, ICTs' constructive impact on everyday life and the importance of public funding and support in ICT research and innovation. Stepping up ICT research and innovation, a key objective of the Digital Agenda for Europe, will help increase Europe's productivity and growth, improve the quality of life and overcome social challenges.

*Sources: August/September 2010*

*Full article available at:*

<http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/10/440&format=HTML&aged=0&language=EN&guiLanguage=en>

## **4 Bulgaria**

### **4.1 Information on the reforms taking place in BAS (Bulgarian Academy of Science)**

A large part of BAS reorganization was completed by BAS General Assembly, which adopted the eight thematic areas.

The first area, "Information and Communication Sciences and Technologies", comprises four institutes. The second area, "Energy Resources and Energy Efficiency", includes two institutes. The third one, "Nanoscience, New Materials and Technologies", consists of nine institutes. The fourth area, "Biomedicine and Quality of Life", involves six institutes. The fifth area, "Biodiversity, Bio-resources and Ecology", is made up of four institutes. The sixth area, "Climatic Changes, Risks and Natural Resources", includes four institutes. The seventh area, "Astronomy, Space Research and Technologies", comprises two institutes, while the ninth, "Man and Society", consists of four institutes.

Once the international evaluation was completed, which was followed by an in-depth discussion with the institutes' research teams, scientific councils and leaderships, and the proposals of BAS Board and the Assembly of Academicians and Corresponding Members were taken into account, agreement was reached on mergers and enlargement of institutes corresponding to the latest trends in the world's research practices. Thus, BAS in its position of a national research center, responds to the Bulgarian's society requirements for restructuring in such a way as to take an active and adequate part in surmounting this country's economic problems. Moreover, BAS thus answers the Bulgarian government's necessities for ensuring up-to-date research and information in the fields of meteorology, geophysics, ecology, Black Sea monitoring, etc.

At the present moment BAS faces a severe problem related to the insufficient budget financing which does not cover BAS institutes overhead expenses for heating, electricity, water, etc. Programs and initiatives are being developed in this respect in order to ensure the institutes' normal operation under these difficult conditions. BAS scientists are well aware of the gravity of the economic crisis affecting the country and will, therefore, assume their responsibility in overcoming the problems.

At its latest meeting on 12 April 2010, BAS General Assembly adopted methodological guidelines in connection with BAS scientists' attestation. BAS researchers thus became the only scientific community in Bulgaria that has independently developed evaluation criteria in order to raise the level of its own scientific research.

The last, eighth, thematic area that has to do with humanitarian studies, will be considered next week; then the administrative structuring of the newly established research units will be launched.

Sources: June 2010

Bulgarian Academy of Science web site: <http://www.bas.bg/cgi-bin/e-cms/vis/vis.pl?s=001&p=0200>

April 13, 2010

#### **4.2 Bulgaria to ask for derogation from R&D target**

Bulgaria will try to reduce the target of investing 3% of GDP in research and development (R&D) established by the 'Europe 2020' strategy – or at least the impoverished country will aim to sharply reduce its national share, writes Dnevnik, EurActiv's partner publication in Bulgaria.

Following discussions held by the Bulgarian government, it has become clear that Bulgaria has no resources to meet the 3% target. This is what the country's prime minister, Boyko Borissov, will tell his counterparts at an EU summit on 17-18 June, when the EU's new research and innovation strategy will be negotiated, Dnevnik writes.

"The EU target is 3%. We think it should be between 1.4% and 2%," Economy Minister Traicho Traikov said after a cabinet meeting on 5 May. This view was adopted as the government's position for the upcoming EU summit, where Bulgaria will negotiate from the position of worst performer in the fields of innovation, investment and competitiveness. At present, just 0.15% of GDP in Bulgaria is spent on R&D.

"We cannot figure out how we could increase the financing of R&D to more than 0.6%," stated Education Minister Sergey Ignatov after the same cabinet meeting. In fact, the 3% target for investment in R&D is for the EU as a whole. Some older members are near or even above the target, while the newcomers are lagging behind (see [Positions](#)). Bulgaria expects the EU budget to provide some help in increasing R&D expenditure. At present, €39 million is available for Bulgaria under the operational programs 'Competitiveness' and 'Human Resources Development'. However, in these particular fields, Bulgaria's absorption capacity proved to be extremely low.

Bulgaria has its own national innovation fund, designed to assist enterprises in the fields of research and innovation. However, the last call for projects took place in 2008 and no selection procedures have been organized for 2009 or 2010.

#### ***'New culture' needed for R&D***

Another challenge for the Bulgarian authorities is to create incentives for businesses to participate more actively in R&D activities. "This means we should introduce a new culture in our country, although I cannot see for the next ten years by what miracle this could take place," Ignatov is quoted as saying.

#### ***Positions***

"The European Commission has never proposed under the Europe 2020 Strategy a 3% goal for Bulgaria and will not be making such a proposal," Mark English, spokesperson to Research and Innovation commissioner Maire Geoghegan Quinn told EurActiv.

The Commission proposed, and EU leaders agreed, that each country should set different, ambitious but realistic national targets taking into account their starting positions, he said.

The exact national targets are likely to be endorsed by the European Council in June, following current discussions between the Commission and Member States, which have been going very well, he added. It is certain that for new member states, including Bulgaria, the final targets will be considerably under 3%, while for some of the leading countries in terms of current investment levels, they will be significantly higher than 3%, the spokesperson explained.

Sources: June 2010

EurActiv Web Site, Published: 28 May 2010 | Updated: 02 June 2010 - [www.euractiv.com](http://www.euractiv.com)

#### **4.3 Declaration of the General Assembly of the Bulgarian Academy of Sciences in Protest of the Drastically Reduced BAS Budget Subsidy for 2010**

At its July 30 meeting the General Assembly of BAS adopted the budget subsidy allocated to the Academy by Republic of Bulgaria's National Assembly; a subsidy that will deal once more, but more strongly than ever, a devastating blow to science in Bulgaria.

While assessing the policy of perpetrating a real genocide over the future and the current activities of the Bulgarian Academy of Sciences – the national research institution that enjoys the highest national and international reputation – we must warn that following this ignominious budget one should only expect injuries to Bulgarian science and culture whose negative effects in all fields are difficult to evaluate.

We do declare that we will undertake any and all possible actions to protect Bulgarian science's present and future, which are to be approached with responsibility and in accordance with the relevant European standards while accounting for the obligations taken on a European level.

We will not tolerate the irreversible ruining of Bulgarian science and will alert the European scientific institutions concerning this consecutive severe financial restriction. The Bulgarian Academy of Sciences will make its position public in a forthcoming press conference and through a series of protest actions.

*Sources: August/September 2010*

<http://www.bas.bg> Publication July 30<sup>th</sup>, 2010

#### **4.4 BAS signed a contract for the establishment of a technological park in Sofia (Bulgaria)**

On July 26 the BAS signed a contract in accordance with the Obligations and Contracts Act for the constitution of a company with the purpose to implement a project for performing five technical and economic studies in preparation for establishing a Technological Park in Sofia.

The park will occupy a land lot owned of BAS in Gara Iskur District with area over 70 dca; its thematic profile will comprise photon, micro and nano technologies. Partners in the company are BAS, Eurobul Innovation Holding, the Higher School on Library Studies and Information Technologies, Denima 2001 Ltd., the Federation of Scientific and Technical Unions in Bulgaria, and GIS – Transfer Center Foundation. The project will be completed within 24 months, which will be followed by the actual establishment of the Park.

*Sources: August/September 2010*

<http://www.bas.bg> Publication July 26<sup>th</sup>, 2010

## **5 Czech Republic**

### **5.1 The Central Europe Technological Institute (Czech Republic)**

The Central Europe Technological Institute CEITEC [1] is expected to formally open in 2015 in Brno, Czech Republic. Scientists, however, are already working on many projects, including the development of biosensors and the development of remote physiotherapy devices. Cooperative agreements are also being prepared with nearly 200 partners, mainly from the private sector.

The main objective of the Institute is to synergize the research laboratories in the region and allow close public-private collaboration in the area of innovative technologies.

CEITEC is located on the new Bohunice campus and extends over 31,000 m<sup>2</sup> (about 333,681 sq.ft.). The four Brno universities in the original project (Masaryk, Mendel, and Veterinary-Pharmaceutical Technology [2]) were associated with the Veterinary Research Institute [3] and the Academy of Sciences of the Czech Republic [4]. They are strongly supported by the South Moravian Region and the city of Brno. CEITEC will gather 58 research teams, attracting more than 800 researchers. Each year, 1,600 students will have the opportunity to train in the various laboratories of the Institute and benefit from the best scientific equipment.

The research at CEITEC will be divided into 9 programs, which reflect the main areas of expertise of scientists in the region:



- *Nano- and micro-technology advances*: the development of new methods for the synthesis of nanostructures, determining their properties and use in electronics, optoelectronics and photonics. An important part of activities will be dedicated to semiconductor nanostructures, magnetic and metal, as well as nanotubes and nanofibers

- *Advanced materials*: an analysis of the properties of ceramic materials, polymers, metals and composites to provide applications in the fields of medicine, chemistry, energy and industry.

- *Advanced communication and control technologies*: new communication and control technologies for applications in life sciences (e.g. capture and transmission of patient data, medical robots, etc.) and scientific material (e.g. microwave analysis).

- *Structural biology*: studies of structures and properties of biologically active macromolecules (proteins, nucleic acids) and their complexes, in order to identify their core functions and their implications in the life processes, as well as at the cellular and molecular level. Analytical techniques with high resolution (X-ray, NMR, cryo-electron, positron, etc.) will be associated with recent advances in modeling, computational chemistry and bioinformatics

- *Plants genomics and proteomics*: understanding the evolution of plant strategies for biotechnological and medical applications. Three main themes will be developed: 1) structure, stability, genome evolution, karyotypes and chromosomes, and epigenetic processes regulating the genetics expression and cellular differentiation, 2) hormonal regulation, control of plant growth strategies of phyto-therapy, 3) search for new biologically active compounds, plants for the production of biopharmaceuticals, such as renewable energy source or precursor materials.

- *Molecular medicine*: development of new methods for analyzing human and microbial genomes, study of cell behavior at the molecular level, particularly in malignant transformation and resistance to cancer treatment, analysis of mechanisms disrupting immune response.

- *Neuroscience*: research on the relationship between the molecular mechanisms in the brain and cognitive responses and behavioral studies and applications in patients with neurological disorders.

- *Veterinary molecular study* of molecular and cellular mechanisms involved in hosts / pathogens relationships, in particular in nutritional elements and in mammalian reproduction.

- *Biomedical technologies*: new technologies that can be used in biological sciences describing electrical and mechanical systems in living organisms at the cellular, tissue and organ levels.

Each program will include the participation of several specialized research groups and will use a multidisciplinary cooperation.

The CEITEC project is still in its evaluation phase. On November 13, 2009, a 3,000 page report was sent to the Czech Ministry of Education, Youth and Sports, for evaluation and selection as a major strategic project to be supported and submitted for funding out of European Commission Structural Funds. The ministry's decision is expected by the end of April 2010. Tomas Hruda, director of CEITEC [5] is confident and said that *"the project was very well fitted and that is why we believe it will be positively evaluated. We are preparing intensive negotiation with the Commission European. (...) We cannot imagine that the project will not pass"*.

Currently, his team is in close and regular liaison with consultants and experts from the JASPERS project implemented by the European Community and the BRED [6], in order to finalize the CEITEC project before this summer.

Meanwhile, the search for partners has already begun. Representatives of the Institute are working with CzechInvest, the Czech Agency for Economic Development and Investment Department of Trade and Industry [7]. Stanislav Martinek, director of the Division of Investments [8], states: *"We had the opportunity*

to get acquainted in detail with the whole CEITEC project and we are aware of the benefits that the Institute will provide to the Czech Republic. The potential access to advanced technology and experienced staff attracts many businesses and Tomas Hrudá ensures to be in contact with over 200 partners involved."

Sources: April 2010

Electronic Bulletin, April 19, 2010

- [1] Web site of CEITEC: <http://www.ceitec.eu/>

- [2] Masaryk University: <http://www.muni.cz> ;

Brno Technological University: <http://www.vutbr.cz/> ;

Mendel University: <http://www.mzlu.cz> and

Veterinary-Pharmaceutical Technology of Brno : <http://www.vfu.cz>

- [3] <http://www.vri.cz>

- [4] <http://www.avcr.cz>

- [5] Tomas Hrudá, Project Director: <http://www.ceitec.eu/contact/project-team/>

- [6] JASPERS web site: <http://www.jaspers-europa-info.org/index.php/home.html>

- [7] Agency CzechInvest web site : <http://www.czechinvest.org/fr>

- [8] Stanislav Martinek, director of the division of investments at the Agency CzechInvest :

<http://www.czechinvest.org/en/stanislav-martinek> et <http://www.czechinvest.org/en/contact-us>

## 5.2 Czechs vie for top in Eastern European R&D league

Most East European EU countries are set to adopt national targets for research and development below the EU-wide goal of spending 3% of GDP on R&D by 2020. Only the Czech Republic appears ready to accept a national target at that level, according to a round-up by the EurActiv network.

At an EU summit on 17 June, most East European countries will try to secure national R&D targets lower than the EU-wide average of 3% of GDP proposed by the European Commission in its ['Europe 2020' strategy](#).

The countries' demands are hardly surprising given huge national disparities in research spending. In Bulgaria, for instance, only 0.15% of GDP is spent on R&D. The country's education minister, Sergey Ignatov, recently said he could not figure out how the impoverished country could raise R&D financing to more than 0.6%, reported Dnevnik, EurActiv's partner publication in Bulgaria.

In Romania, President Traian Basescu said in late April that his country would be unable to attain the R&D spending target of 3% of GDP by 2020, set out in the EU's new 'Europe 2020' strategy. Romanian authorities later came up with a more "realistic" figure of 2%.

In Slovakia, the government has set a goal of investing 1.8% of its GDP on research by 2015. According to government data, Slovakia is now spending around 1.2% of its GDP on R&D and innovation.

According to government data, Hungary spends approximately 0.9% of its GDP on R&D and innovation each year. Looking only at public resources, the country spent €0.4 billion on R&D in 2008 – or 0.5% of GDP. As the country has a new government, few details have emerged as to how the cabinet intends to achieve the R&D goals.

In Poland, according to official data, the country only spent 0.56% of its GDP on R&D in 2006. Statistics also show that Poland, the biggest of the EU newcomers with its 38.2 million population, submits half as many patents as the Czech Republic, which has a population of 10.5 million.

### [EU-wide goal, differing national targets](#)

The 3% target for investment in R&D is for the EU as a whole. Some older members like Sweden or Finland have exceeded the target already, while most newcomers from Eastern Europe are lagging behind. The European Commission proposed, and EU leaders agreed, that each country should set different, ambitious but realistic national targets, taking into account their national starting points, said Commission spokesperson Mark English.



The exact national targets are likely to be endorsed by EU leaders in June, following discussions between the Commission and member states, which have been going very well, he added.

What appears certain is that for new member states such as Poland, the final targets will be considerably below 3%, while for some leading countries like Sweden, they will be significantly higher than 3%, the spokesperson explained.

The Czech Republic, however, appears to challenge the perception that East Europeans will be unable to reach the 3% target by 2020. Surprisingly, the caretaker government proposed a higher national target than the more modest 2.3% proposed by the European Commission.

Last year, the country spent around 1.54% of GDP on R&D, according to OECD figures. Yet the government believes it can do even more and has set itself the more ambitious goal of 2.7% by 2020.

#### *Public vs. private?*

In all countries, governments are discussing how to break down their national targets between various sectors – public, private and EU structural funds. Such details are often regarded as confidential, but in some cases the authorities have revealed their intentions. In Romania, President Basescu said the state would contribute to a third of the target, while the private sector will be expected to provide the remaining two thirds. In Slovakia too, the government predicted that two-thirds of its 1.8% research target would be funded by the private sector. Some consider this a bold statement, considering that around 52% of funding currently comes from public sources, only 34% comes from private sources, and the remaining 14% comes from foreign finance.

#### *Who will make it up?*

It remains to be seen who will foot the bill if several countries remain a long way below the 3% average. A large country like France, which would be expected to invest considerably more on research, invested only 2.2% of its GDP in R&D in 2001. Instead of rising, this figure has been decreasing ever since. In 2007, only 2.08% of France's GDP was invested in R&D, around half of which came from the private sector. According to Eurostat, the best performer in R&D investment for 2007 is Sweden with 3.6%. No other country surpassed the 3% threshold. Austria was the second-best performer with 2.56%. France spends around €40 million per year on R&D, while Germany spends €61 million. In comparison, the US spends \$269 million.

*Sources: June 2010*

*EurActiv Web Site: [www.euractiv.com](http://www.euractiv.com) - Published: 04 June 2010*

### **5.3 Czechs ready to spend 3% of GDP on R&D**

Applying the EU's target of raising investment in R&D to 3% of GDP by 2020 is seen in the Czech Republic as attainable, even at national level. Surprisingly, the caretaker government proposed a higher national target than the more modest 2.3% proposed by the European Commission.

The target, proposed by the Commission in its 'Europe 2020' strategy', of raising investment in R&D to 3% of the EU's GDP is seen as applicable within the Czech Republic by the caretaker government led by Jan Fischer, himself a scientist.

Although the position of the future government – currently being negotiated following the 28 May general elections – could potentially be different, the new cabinet will most probably form after the upcoming European Council summit on 17-18 June. It will therefore be the caretaker cabinet that is involved in the negotiations. Czech officials have set a national target of investing 2.7% of the country's GDP in R&D by 2020. "Draft documents that have been prepared for discussion by the government would not embrace such a goal if they did not believe it to be attainable by 2020," said Tomáš Bouška, a spokesperson for the Czech Ministry of Education and Sport.

#### *Prague more ambitious than Commission*

As the EU's 3% target is expected to be broken down into individual national goals reflecting countries' different starting positions, the Commission has proposed a 2.3% target for the Czech Republic. Last year, the country spent around 1.54% of GDP on R&D, according to the OECD. Yet the government believes it can do even more and has set itself the more ambitious goal of 2.7%.

The government is now discussing how to divide this national target among various sectors – public, private (businesses) and EU structural funds. Spokesperson Bouška declined to provide any details, citing the confidential nature of the document. However, he did say that a systematic, incremental increase in public spending is not unrealistic and that private companies have also pledged to co-finance R&D investment. "For them, it's a matter of prestige," said Bouška, cautioning that the pledge is conditional on government support for more R&D investment.

#### *Too rosy a picture?*

Although officials have painted a rosy picture and the government last year listed investment in R&D as one of its biggest priorities, tightened budgets due to the economic crisis prevented it from increasing spending. Moreover, the outlook for further increases looks gloomy for the coming years. But much will depend on the new government. So far, all the centre-right parties that are potentially on the way to forming a new government – the Civic Democratic Party (ODS), Tradition Responsibility Prosperity 09 (TOP 09) and Public Affairs (VV) – have cited higher investment in R&D among their priorities. Yet it remains to be seen how serious their pre-election rhetoric was and what measures can realistically be taken given that their main task will be slashing the budget deficit.

#### *Businesses expect incentives*

Czech business figures see building a knowledge economy based on strong investment in R&D as essential. "It is a long term priority for the Confederation of Industry of the Czech Republic," said Milan Mostýn, a spokesperson for the industry body.

However, he also said that investment in R&D is not expected to increase for some time. A survey carried out by the Confederation of Industry among its members showed that out of 1,600 businesses, almost 60% cut their R&D budgets due to the crisis, while only a quarter decided to invest more. With the longer term in mind, the confederation asked the government to prepare a new national R&D strategy, together with business organizations, that will identify a number of research areas to be prioritized. "Also, one of the options [on how to raise private investment] would be the implementation of tax breaks for companies that decide to invest in R&D," Mostýn said.

#### *Absorption capacity questioned*

Yet other business organizations warn that money is not everything. Referring to a document prepared by business and industry association Eurochambres, the Czech Chamber of Commerce warns that spending on R&D itself "will not contribute to growth" and that "R&D must respond to the needs of businesses, which in turn require far closer links between business and the research community".

Zdeněk Kučera and Michal Pazour, researchers at the Technology Centre of the Czech Academy of Sciences, agree that it is not just a question of money. Talking to EurActiv.cz, they said that from a factual standpoint, "it is very problematic to create any kind of goal as it ignores efficiency of investment, absorption capacity of research and business, structure of the economy, etc."

The goal should not only reflect the wishes of politicians, but also the economic circumstances for both the efficiency and the absorption capacity of the investments, they added. With this in mind and given the economic level of the country in terms of GDP per capita, the Czech Republic is not performing badly in comparison to other European countries, Kučera and Pazour argued. Although it ranks in the group of less developed countries – with 1.54% investment in R&D – the Czech Republic invests more than any other country in this group, they stated.

#### *More private money needed*

The scientists said the country could do much better in terms of private R&D investment. With private sources making up just 0.52% of total R&D expenditure, the Czech Republic is far below the EU average. Yet the level of public spending on R&D is relatively high, meaning that "public money has not leveraged private investment so far," the researchers admit. They said that much more attention should be given to the usefulness and efficiency of public investment.

What can be done to achieve this? There could be programs to support cooperation between private companies, as well as tax breaks, innovation vouchers and boosting the absorption capacity of

businesses, for example via horizontal mobility or consulting service programs, Kučera and Pazour concluded.

*Sources: June 2010*

*EurActiv Web Site: [www.euractiv.com](http://www.euractiv.com) - Published: 03 June 2010 | Updated: 04 June 2010*

#### **5.4 Czech Government Fund for Innovation**

The Ministry of Industry and Commerce [1] establishes a fund that will buy shares in innovative start-ups. Thus, the government will be directly involved in companies having good ideas.

This special fund is expected to be operational by January 2011 with a budget of 50 million Euros. This money comes from EU subsidies allocated under the Operational Program "Innovation and Entrepreneurship", but also from the state budget and private investors.

Such funds already exist in several European countries including France, Italy, Cyprus, Lithuania, Slovakia, Hungary and Poland. According to the Minister of Industry and Commerce, the main objective of this mechanism is to encourage the development of a knowledge economy. He explained that after a while the Czech state will sell the shares it holds in a company, ideally for more than it purchased them. The money earned will replenish the funds and be used to help other start-ups to take off.

Petr Ocko, Director of Division of the Ministry dealing with EU funds [2] stresses that the scheme takes into account the risk that some of the supported enterprises will fail in the marketplace. To limit these risks, it is important, first, to make a careful selection of companies supported, and second, to provide relatively modest assistance to a large number of small companies. The European Union sets indeed a maximum of 1.5 million Euros per company.

The CzechInvest Agency [3] had proposed the establishment of a similar mechanism for small businesses, which would use EU funds to support up to 60% of expenditures devoted to information technology. The European Commission has called for a moratorium on this project until certain rules of competition have been agreed upon.

*Sources: December 2010*

*- Electronic Bulletin, December 20, 2010*

*- [1] [http://www.mpo.cz/default\\_en.html](http://www.mpo.cz/default_en.html)*

*- [2] Petr Ocko: Ing. Petr Ocko, Ph.D., Ministerstvo průmyslu a obchodu, Letenská 15, 118 10 Praha 1.*

*Adresse email : [petr.ocko@mfc.cz](mailto:petr.ocko@mfc.cz)*

*- [3] CzechInvest : <http://www.czechinvest.org/en>*

#### **5.5 2009 Funding of R&D in the Czech Republic**

After declining in 2008, the total expenditure incurred for the R&D sector increased by 1.2 billion CZK (48 million Euros) in 2009, corresponding to 1.53% of GDP. The comparison with expenditure in the same sector in other EU countries in correlation with the GDP, is putting the Czech Republic behind 15 European countries but among the highest ranked of the new members (second behind Slovenia). These results were released in October 2010 by the Czech Statistical Office (CZSO). In addition, the agency insists on the 3-year decline of contribution from the private sector in financing research: in 2009, for the first time, this share fell below 50% of the national effort. However, this sector still plays a vital role in funding Czech R&D.

It is interesting to compare this data against the objectives that the Czech government displayed in the context of the 2005-2010 national policy on innovation. Among the recommended actions, the steady increase in public expenditure for R&D should be able to offset a decline in private sector engagement, with the goal of a public effort reaching the threshold of 1% of GDP. Until 2007, the investment of the latter was maintained at around 0.6% of GDP and the private sector about 0.85%. In 2008, the withdrawal of some private investors led to a decline in financial efforts (1.46% of GDP). Increasing public investment in 2009 helped stem the decline and re-crossed the threshold of 1.5% of GDP. However, the threshold of

1% for public spending is still far from being achieved. Finally, a significant increase in foreign investment is noteworthy: it now accounts for more than 5% of funds allocated to R&D in the Czech Republic.

*Sources: December 2010*

*- Electronic Bulletin, December 20, 2010*

## **6 Denmark**

### **6.1 Denmark and India expand collaboration on biotechnological research**

The steering group had received ten applications in the first round, covering a broad spectrum of biotechnological research.

– It is very important that the applications are considered jointly by both sides. That will ensure that we bring the best and most appropriate research environments together, explained the group's chairman, Professor Mogens Hørder of the University of Southern Denmark.

#### *Two new application rounds*

It was agreed at the meeting that new application rounds for setting up joint Indo-Danish research projects would be arranged for the end of 2006 and for 2007.

#### *Memorandum of Understanding*

The close collaboration between the two countries is a result of the visit to India by a delegation led by Danish science minister Helge Sander in the autumn of 2004, during which the minister and his Indian counterpart signed a Memorandum of Understanding (MoU) on biotechnological research.

In the beginning of 2005, the two Ministers appointed the Danish and Indian members respectively of the Indo-Danish steering group.

#### *The Research Councils are involved*

Both the Danish Council for Strategic Research and the Danish Councils for Independent Research are represented in the steering group.

Professor Mogens Hørder, Dean at the University of Southern Denmark, and Lene Lange, Science Director at Novozymes, are member and vice-chair of the board of the Danish Council for Strategic Research, and Egon Bech Hansen, Director of Research at Danisco, is on the board of the Danish Councils for Independent Research.

– When the agreement was signed, it was the wish of both sides to focus on specific activities that would bring research teams into contact and collaboration. Personal contact between the research teams is essential for the establishment of long-term cooperation. So I am particularly glad that we can already look back at having initiated three contact-forming activities – Scout-India, workshops, and joint research projects, said Professor Hørder.

– The business community is informed about or directly involved in all the activities we initiate. That leads to the potential for the creation of public-private partnerships in biotechnology with both Danish and Indian participants, stated Lene Lange. We are also working on a research training initiative, she added.

#### *Scout-India*

The first two activities chosen by the steering group for implementation were joint workshops and the 'scouting' scheme – both activities that gave researchers an opportunity to make direct contacts.

The Scout-India scheme, which was launched in 2005, allows Danish researchers to travel to India to seek out research environments with which collaboration might be established – and vice versa.

– It was important for us to get concrete collaborative actions started. And Scout-India has borne fruit. So we on the Danish side will be continuing with that initiative in 2006, observed Lange.

It was decided at the meeting in India last week that a similar scheme would be put in place on the Indian side, which will allow up to ten Indian researchers to visit Danish research environments in 2006 as a preparation for the design of joint projects.

### *Workshops – now and in the future*

– When the agreement was signed, one of the areas that both sides wished to focus on was stem cell research. Therefore the steering group made that the subject of the first joint workshop. And so a group of top Danish researchers in that field, led by Professor Jens Zimmer Rasmussen, took part in a joint workshop in Bangalore in the last week of February, said Professor Hørder. A workshop on nutrigenomics is planned to take place in India in September 2006. The Danish coordinator for that is Egon Bech Hansen, Director of Research at Danisco. In addition, a joint workshop on bioinformatics and system biology will be held in Denmark in March 2007.

### *Strategic funding?*

– The Danish Council for Strategic Research is working to have funds allocated in the 2007 Budget for a targeted global research collaboration with the new growth economies, said Lange, who is vice-chair of that Council.

– Denmark must commit to research collaboration with growth countries such as India, which can already offer collaboration with top-class environments in several fields. That is globalization in practice. And it is a clear win/win situation for both countries, she added.

At the request of M. K. Bhan, Director, Indian Ministry of Science, the steering group has undertaken to produce a draft for a joint targeted development plan to address the 'grand challenge' of tackling the areas of developing biotechnology for environmentally sustainable industrial processes and developing integrated epidemiology and biotechnology to improve public health.

### *Members of the Danish Steering Group:*

- Professor Mogens Hørder, Dean, University of Southern Denmark (Chairman).
- Egon Bech Hansen, Director of Research, Danisco.
- Lene Lange, Science Director, Novozymes.
- Professor Jesper Wengel, University of Southern Denmark.
- Professor Torben Greve, the Royal Veterinary and Agricultural University of Denmark.
- Jens Peter Jacobsen, Director, Ministry of Science, Technology and Innovation.

### *For further information:*

*Chairman of the Steering Group for Indo-Danish Biotech Collaboration, Professor Mogens Hørder, Dean, Faculty of Health Sciences, University of Southern Denmark. Phone: +45 6550 2932, Cell: +45 6011 3015, e-mail [mhorder@health.sdu.dk](mailto:mhorder@health.sdu.dk)*

*Gunvor Nielsen, Consultant, Ministry of Science, Technology and Innovation. Phone: +45 3395 4019, e-mail [gni@vtu.dk](mailto:gni@vtu.dk)*

### *Sources: June 2010*

#### *Danish Agency for Science Web Site:*

<http://en.fi.dk/news/denmark-and-india-expand-collaboration-on-biotechnological-research-1/>

## **6.2 Denmark Aiming to Host the "Research Olympics"**

Denmark is aiming to host Europe's largest research festival in Copenhagen in 2014. Hard work behind the scenes and an application underway will hopefully result in up to 5,000 researchers, companies, institutions and visitors participating in Euroscience Open Forum (ESOF) on Danish soil.

– Copenhagen and the Øresund Region are a high profile knowledge area with many universities and large companies – all contributing to ensure the research festival will be a special experience. With business leaders and researchers from all over Europe in attendance, Denmark will have a unique opportunity to draw attention to what makes Denmark special – not just from a research angle, but also in society and as a nation, says Science Minister Charlotte Sahl-Madsen.

### *Sources: December 2010*

[Read the full article at en.vtu.dk](http://en.vtu.dk)

## 7 Estonia

### 7.1 Country report in Nature (Estonia)

Nature published the country report of Estonia on November 25th, 2010.

In the two decades since Estonia regained its independence, its research and development system has undergone major restructuring with a renewed focus on supporting excellence in science. This promotional feature highlights the scope and objectives of the Estonian scientific research and development system, as it addresses the global and societal challenges of the twenty-first century.

*Sources: December 2010*

*Full article available at:*

<http://www.nature.com/nature/supplements/regionalreport/estonia/index.html#pdf>

## 8 Finland

### 8.1 Finland, US, and Holland Look to School of the Future

*Sources: May 2010*

*Full article available at:*

<http://www.tekes.fi/en/community/News/482/News/1344?name=Towards+the+future+school>

### 8.2 Finland Seeks to Jump Start National Innovation

*Sources: May 2010*

*Full article available at:*

<http://www.tekes.fi/en/community/News/482/News/1344?name=Finland+harnesses+innovation+with+uniqueness+public-private+collaboration>

### 8.3 Finland and China Strengthen Innovation and Environmental Ties

*Sources: May 2010*

*Full article available at:*

<http://www.tekes.fi/en/community/News/482/News/1344?name=Finland+and+China+to+Strengthen+Innovation+and+Environmental+Cooperation>

### 8.4 Water Efficiency Excellence Center to be Established in Finland

*Sources: May 2010*

*Full article available at:*

<http://www.tekes.fi/en/community/News/482/News/1344?name=A+Center+of+Water+Efficiency+Excellence+will+be+established+in+Finland>

### 8.5 Inverse Problems Initiative: Trilateral call between Finland, Germany and China (Finland)

The Academy of Finland, the German Research Foundation (DFG) and the National Natural Science Foundation of China (NSFC) launch a joint call for proposals, the aim of which is to promote Finnish-German-Chinese research cooperation in the field of inverse problems. The aim of the so-called Inverse Problems Initiative is also to promote cutting-edge research projects and long-term systematic research collaboration, and to establish and strengthen research collaboration networks between Finland, Germany and China.

The call opens and the call for proposals will be published on 10 May 2010. All applications must be submitted no later than **15 June 2010 at 4:15 pm**.



The relevant research areas of the Inverse Problems Initiative include the mathematical, statistical and physical aspects of research into inverse and ill-posed problems. More detailed information is available in the call for proposals.

Funding is available for bilateral and trilateral research projects comprising researchers or research teams from at least two of the participating countries. The proposal shall include a joint research plan drafted jointly by the Finnish research team and the German/Chinese research team. The partners shall apply for funding for their own projects from their respective national funding agencies, in accordance with the guidelines and practices of the organisation concerned.

The funding applied for from the Academy of Finland is intended for salary costs, supporting researcher mobility, acquisition of material and research equipment, other costs (e.g. workshops and seminars), and the overheads percentage.

The joint projects will be funded for a maximum of three years.

#### *Application procedure*

The Finnish partner submits an online application with appendices to the Academy of Finland in accordance with the Academy's general application guidelines. The application deadline is 15 June 2010 at 16.15. The deadline is non-negotiable.

The application is completed at [www.aka.fi/eng](http://www.aka.fi/eng) > For researchers > [Log in to online services](#). Log in and select New application > Inverse Problems Initiative.

The German partner submits its application to DFG, according to DFG's instructions, and the Chinese partner to NSFC, according to NSFC's instructions.

#### *More information*

- [DFG – Deutsche Forschungsgemeinschaft](#)
- [NSFC – National Natural Science Foundation of China](#)
- [Academy of Finland: Mika Tirronen, PhD, Program Manager, Phone: +358 9 7748 8255, \[mika.tirronen@aka.fi\]\(mailto:mika.tirronen@aka.fi\)](#)
- [Germany: Frank Kiefer, PhD, Program Director, German Research Foundation \(DFG\), Phone: +49 \(228\) 885-2567, \[frank.kiefer@dfg.de\]\(mailto:frank.kiefer@dfg.de\)](#)
- [China: Lu Rongkai, Director of Division, NSFC, Phone: +86 10 623 25351, \[lurk@nsfc.gov.cn\]\(mailto:lurk@nsfc.gov.cn\)](#)

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*Sources: June 2010*

*Academy of Finland Web Site:*

[\*http://www.aka.fi/en-gb/A/Academy-of-Finland/The-Academy/Releases/Inverse-Problems-Initiative-Trilateral-call-between-Finland-Germany-and-China/\*](http://www.aka.fi/en-gb/A/Academy-of-Finland/The-Academy/Releases/Inverse-Problems-Initiative-Trilateral-call-between-Finland-Germany-and-China/)

## **8.6 Global Access Program Opens Global Market To Finnish Companies (Finland)**

The first Finnish company attended the Global Access Program in California 11 years ago. This year, 14 companies from Finland are hoping to become one of the many success stories created by this educational program.

*Sources: August/September 2010*

*Full article available at:*

[\*http://www.tekes.fi/en/community/News/482/News/1344?name=Global+Access+Program+opens+the+global+market+to+Finnish+companies\*](http://www.tekes.fi/en/community/News/482/News/1344?name=Global+Access+Program+opens+the+global+market+to+Finnish+companies)

## **8.7 Finland and Hungary Renew Cooperative Research Agreement**

Promoting quality research, encouraging faster application of scientific results, and utilizing the resources emerging from the improvement of international research collaborations, these were the main goals among others of the Memorandum of Understanding remaining in force until the end of 2013 signed by

President of the Academy of Finland [Markku Mattila](#) and President of the Hungarian Academy of Sciences [József Pálincás](#). The two presidents put their signature on the Memorandum during the last stage of Finnish Prime Minister Mari Kiviniemi's visit in Budapest.

The collaboration of Hungarian scientists and the researchers of Finland dates back to 1975 when chief officers of HAS signed their very first memorandum with the Academy of Finland. In May 2010, the Academy of Finland initiated contact with the President of the Hungarian Academy of Sciences to re-establish the connections between the two institutions. Following the initial steps, the two presidents worked together on refining and finalizing the statements of a new Memorandum of Understanding.

There is active co-operation between the academies of the two countries in almost every area of science. The [Institute of Nuclear Research of HAS](#), and the [Geodetic and Geophysical Research Institute of HAS](#) have the closest relationship with their Finnish partner institutes, and HAS' Institute for Literary Studies also maintains active connections with Finnish scholars. Moreover, [HAS' Computer and Automation Research Institute](#) has been participating in various European research projects along with leading corporations, and the [Institute of Biophysics of HAS' Biological Research Institute](#) fosters a good relationship with the Helsinki University of Technology.

To further enhance Hungarian-Finnish collaboration, a series of events called *Finnish Days* are to be organized at the Hungarian Academy as part of the upcoming Festival of Hungarian Science. HAS President József Pálincás has invited Markku Mattila, President of the Finnish Academy to take part in the opening ceremony. For the first time a country will be an official guest of the Festival of Hungarian Science celebrating its 10th birthday this year. During Finnish Days, the attendees are going to have the opportunity to hear several intriguing lectures and presentations on multidisciplinary research such as the talk on the connection between music, the mind, and the brain. An unusual call to action will also be presented during Finnish Days in the form of a new comic on climate change. The goals and aspirations stated in the Memorandum closely match the spirit of the Festival of Hungarian Science. This year's motto, "Science without Borders", implicates the challenges and possibilities inherent in scientific collaboration. By organizing Finnish Days the Hungarian Academy of Sciences places great emphasis on interdisciplinary co-operation transcending geographical borders. The presidents of both academies believe that high quality international scientific collaboration is only achievable through the synchronized activity of technological and research institutes.

*Sources: August/September 2010*

*Full article available at:*

[http://www2.mta.hu/index.php?id=858&no\\_cache=1&backPid=856&tt\\_news=128802&cHash=44a4f4ee81](http://www2.mta.hu/index.php?id=858&no_cache=1&backPid=856&tt_news=128802&cHash=44a4f4ee81)

## 9 France

### 9.1 Cluster Update - Energy: the TENERDIS cluster sign with the American NREL (France)

The Agency for Studies and Promotion of the French Region Isère (AEPI), responsible for the economic development of Isère, has identified the State of Colorado, United States, as one of the regions with comparable ecosystems and work methods to those developed by the TENERDIS cluster, particularly regarding a key factor of economic development--the synergy between industry, research, and higher education. It is in this context that several meetings were held during the past two years, both in Denver, Colorado, and in Grenoble, France, with different economic players, including TENERDIS and the National Renewable Energy Laboratory (NREL). For the competition cluster located in Isère, the goal was not only promoting the regional territory and skills, but also identifying potential technology sector collaborations.

The finding of obvious complementarities between the actors and the emergence of a common interest in developing the renewable energy sector have led to the establishment of a Memorandum of Understanding signed on April 12 between TENERDIS and NREL\*. The renewable two-year MOU covers solar areas (photovoltaic and Concentrated Solar Power) and smart grids (networks of intelligent



energy management). The aim of this agreement is to exchange best practices on these subjects of common interest, which may also be extended to other innovative themes.

*"It is no coincidence that we found the State of Colorado as partner: the synergies between research and industry are the basis of its dynamic ecosystem, close to the Grenoble-Isère one", says Hervé Fradet, Director the AEPI. "This is an unprecedented event for our center, which has played a pioneering role in an international partnership", says Jean-Pierre Chardon, chairman of TENERRDIS. "With TENERRDIS, NREL found in Grenoble-Isère, a choice partner with shared goals of development, deployment and commercialization in the field of renewable energy and energy efficiency" said Ron Benioff, responsible for the NREL international program.*

*Sources: April 2010*

*Electronic Bulletin, April 21, 2010*

*Tenerrdis - <http://www.tenerrdis.fr/> - Nathalie Alexandre: Phone +33 (0)4 76 54 46 39 - email : [nathalie.alexandre@tenerrdis.fr](mailto:nathalie.alexandre@tenerrdis.fr)*

*National Renewable Energy Laboratory (NREL): <http://www.nrel.gov>*

*\*NREL press release: <http://www.nrel.gov/news/press/2010/832.html>*

## **9.2 Master Degree in Engineering for Health (France)**

A unique partnership between the University Paris Descartes and the Cluster of Research and Higher Education (PRES) ParisTech has given birth to the "Bioengineering Master Degree", aiming to be the French equivalent of the Master Degree in "Biomedical Engineering" offered by the best universities in Europe and North America. *"The review of international competition confirms that the best masters in bioengineering result from the close cooperation between engineering and biomedical",* said Cyril van Effenterre, President of ParisTech. Therefore the importance of the partnership between the University Paris Descartes and ParisTech which will enable the new Master Degree to benefit from the expertise of laboratories in these two institutions, which is an important asset.

Open to future doctors, engineers, and researchers, this two-year program will consist of courses at the University Paris Descartes and one of the schools of ParisTech. Several internships in laboratories will ensure a professional opportunity. To be accessible to students globally and to attract the best teachers from different specialties, this course will be taught in English. The program will include a general education and options tailored to the different backgrounds of students. Besides academic subjects, sessions on culture, ethics, economics and business world will be offered. Finally, after the first two semesters, students will be offered a curriculum developed in five specialties: "Bio-imaging, Biomechanics and Biomaterials", "Molecular and Cellular Biotherapy", "Synthetic Methods", "Information and Interaction", and "Industrial Bioengineering".

*Sources: April 2010*

*Electronic Bulletin, April 21, 2010*

*Paris Descartes University: Alice Tschudy : Phone +33 (0)1 40 46 18 63 - email : [alice.tschudy@parisdescartes.fr](mailto:alice.tschudy@parisdescartes.fr)*

*ParisTech: Jacques Bringuez : Phone +33 (0)6 80 17 98 05 - email : [jacques.bringuez@paristech.fr](mailto:jacques.bringuez@paristech.fr)*

## **9.3 French Agencies to Coordinate Energy Research**

On April 21, the ANR (French National Agency for Research) and the National Alliance for the Coordination of Research for Energy (ANCRE) signed an agreement to harmonize national approaches and ideas for the development of future research programs on energy.

ANR is currently preparing its energy programs for 2011-2013. The evolution of ANR programming has been discussed by a scientific committee composed of French and foreign energy experts, managers of public research and industry.

ANCRE has established nine programmatic groups, whose role is to provide an overview of the French public research on energy, to analyze its strengths and weaknesses, and suggest areas of programming.

The agreement provides that the composition of the Scientific Committee of the ANR include energy program group leaders and a representative of the Coordinating Committee of ANCRE. Sessions of the Scientific Committee will discuss proposals for ANCRE.

ANR has a research program focusing on both new energy technologies (solar, bioenergy, hydrogen and fuel cells, energy storage, capture and storage of CO<sub>2</sub>, etc.) and energy effectiveness in buildings, industry and transport. ANR funds 70 research projects per year as part of its annual programming, over 85% of which are financed by public-private partnerships, for a total assistance of about € 65M. Since its founding in 2005, ANR has committed over € 320M to fund 400 projects.

ANCRE was established in 2009 as an initiative of the CEA, IFP and CNRS, founding members associated with 15 other public research organizations. ANCRE's mission is to offer the lineup of R&D as part of the policy set by the French state to promote partnerships and synergies between researchers and to identify scientific, technological, economic and social factors that limit industrial developments in the field of energy.

*Sources: June 2010*

*French Ministry for Research web site*

*<http://www.agence-nationale-recherche.fr/actualite/13?lngInfold=365>*

*ANCRE web site: <http://www.allianceenergie.fr>*

*Press Contacts:*

*ANR : Aline Tournier, [aline.tournier@agencerecherche.fr](mailto:aline.tournier@agencerecherche.fr) - Phone: +33 (0)1.78.09.80.73*

*ANCRE : Anne-Laure de Marignan, [A-Laure.DE-MARIGNAN@ifp.fr](mailto:A-Laure.DE-MARIGNAN@ifp.fr)*

#### **9.4 Research in bad shape in France**

Investing 3% of GDP in research and development (R&D) – one of the targets of the EU's 'Europe 2020' strategy – is badly needed in France but there is little chance of this goal being met in the next decade, especially at a time of crisis.

Since 2000, when the Lisbon Strategy was launched, France has never reached the target of spending 3% of GDP on R&D. According to Eurostat, French investment was 2.2% in 2001 and has decreased ever since. In 2007, it was 2.08%, around half of which came from the private sector. Compared to other European countries, France is ranked 14<sup>th</sup>, far behind Sweden (3.6%) and Finland (3.5%). France spends around €40 billion, while Germany spends €61 billion and the US €269 billion. Moreover, France is the only OECD country in which the government budget for R&D has decreased in real terms (around -4%) in the last decade.

To address the issue, the French government claimed to be putting new impetus into the research field in 2008 with a "national strategy for research and innovation" (SNRI). Designed to set out priorities to enhance research achievements between 2009 and 2012, it came up with the following: health and biotech; environmental emergency and green technologies; and information, communication and nanotechnologies.

29 projects have emerged from these priorities, which are subsidized by a 'big loan' (*grand emprunt*) of €35 billion.

In December 2009, French President Nicolas Sarkozy detailed the areas that were to benefit from the loan: universities and research received the lion's share, securing €1 and €8 billion respectively. €5 billion was allocated to the development of renewable energies.

#### *A necessary but unattainable objective?*

There is general consensus in France about the necessity to increase investment in R&D. According to the government, the 3% goal is a "key factor for growth" and must remain "at the heart of our priorities". Investment is essential for France, since it is clearly lagging behind Japan and the US. However, French economist Mathieu Plane believes that even though setting an EU-level target is "desirable", the objective

is "unattainable". He argues that there are serious political obstacles: "France did not manage to accomplish it during periods of growth in the early 2000s. Therefore, there is no way it will change during the next decade, especially at a time of crisis," he explained.

Indeed, whenever there is a crisis, the R&D budget is the first to be sacrificed. Cuts are inevitable since France will have to make them to limit its deficit to the 3% limit set by the EU's Stability and Growth Pact. According to Plane, investment in research is a long-term process which is "disconnected from the electoral period".

#### *What about the 'grand emprunt'?*

In December 2009, President Sarkozy described the 'big loan' as an important step forward and justified the large share allocated to R&D. "It is key for our future competitiveness," he said. Sarkozy argued that "we need to take advantage of the crisis to modernize obsolete structures," because "who could seriously think that France can win the battle of intelligence with tools dating back to the middle of the century?"

Jacques Fontanille, chancellor of Limoges University and vice-chairman of the [CPU](#) (*Conférence des présidents d'universités*), views the funds favorably, predicting that universities will gain more "financial independence from the political changes". He went on: "Budgets will be funded in the long-term since they will no longer depend on the hazard of annual budgets." Yet several officials are deeply skeptical about the loan. Scholar and research workers' association '[Sauvons la recherche](#)' points out that the €11 billion actually consists of capital contributions. This means that once funded, universities will only receive the interest rates – around €500 million per year, according to the association. Fontanille was also critical of this: "Their amount will depend on the evolution of the markets," he said.

Moreover, these subsidies will go to the biggest universities, meaning that the gap between universities and students will widen and "super elitist universities" will propose while others are left behind. Plane also pointed out that the investment does not mean that the 3% target will be met, since it is a "short-term investment". "Long-term lack of debt is necessary to finance R&D," he concluded.

#### *Positions*

According to economist Mathieu Plane, "a lack of investment in R&D is deeply worrying. It might lead to impoverishment in the long-term. Growth depends greatly on R&D". The association Sauvons la recherche said that "the amount of the '*grand emprunt*' must not disguise the fact that it only consists of an adjustment, leaving our country way below the 3% target for research".

Moreover, it considers the loan as "a decisive step towards utilitarian-oriented research". For instance, in biology, "the simplification of cooperation between research and industry [...] has already led to the layoff of researchers in private labs, while researchers in public labs are forced to become sole contractors without having enough time to carry out their primary mission, i.e. carrying out research oriented by the sole internal logic of their discipline and explaining to the people the positive as well as the negative aspects of their findings," the association said.

Higher Education and Research Minister Valérie Pécresse stated that with "such an investment, France is betting on research and intelligence to escape from the crisis and is now at the same level as the United States".

Jacques Fontanille, chancellor of Limoges University and vice-chairman of the CPU (*Conférence des présidents d'universités*), questioned the effectiveness of the government's methods. "The loan will increase disparities between universities, but at the same time, these already exist". Regarding the 3% target, Fontanille believes that the loan "will certainly help get France closer to the objective. But it will not be enough since it consists mainly of capital contributions. Claiming that the target has been reached thanks to the loan would be rather artificial," he concluded.

*Sources: June 2010*

*EurActiv Web Site, Published: 31 May 2010 | Updated: 01 June 2010 - [www.euractiv.com](http://www.euractiv.com)*

## **9.5 CNRS - Stronger and More Open: a year after the adoption of its 2009-2013 objectives (France)**

At the launch of the new CNRS National Institute for Mathematical Sciences (INSMI), Valérie Pécresse, Minister for Research, presented the results on the CNRS transformation one year after the adoption of its 2009-2013 objectives. Organized into 10 thematic institutes, CNRS is now more open and plays an autonomous partnership role with universities. At the head of CNRS, CEO Alain FUCHS is particularly active -- he has done a remarkable job to continue and develop this dynamic transformation.

With the National Institute of Mathematical Sciences and the other 9 thematic institutes, CNRS has now a more coherent organization, which builds scientific projects over the long term and quickly mobilizes resources to meet the national strategic research priorities for research and innovation.

Alain Fuchs is committed to make interdisciplinary links at the CNRS clearer and more operational, with the creation of interdisciplinary centers and a more collegial leadership involving all Institute Directors.

This new organization will be more effective as CNRS has chosen to refocus on its strategic outlook, leverage projects, and encourage the institutes to become more a resource agency. This organization will also be based on assessments conducted by AERES (Agency for Evaluation). Virtually all the units and/or laboratories have already been evaluated and AERES will evaluate the entire facility in 2011. The Government is accompanying this modernization effort by increasing its annual subsidy of 194 million Euros since 2007, an increase of 8.4%, and maintaining employment in 2010 and 2011.

CNRS is now one of the top 10 global research agencies to file patents in the United States. This is an encouraging result, but it must be pushed further. CNRS will be even more active in its industrial property policy in order to facilitate and accelerate technology transfer to the business world. Business partners should soon be able to be offered preferential patent rights.

*Sources: June 2010*

*Valérie Pécresse's speech, June 28, 2010*

*Full French article available at:*

<http://www.enseignementsup-recherche.gouv.fr/cid52282/un-cnrs-plus-fort-et-plus-ouvert-un-an-apres-l-adoption-de-son-contrat-d-objectifs-2009-2013.html>

## **9.6 ATHENA, the Humane and Social Science Alliance (France)**

ATHENA, the fifth and last born of the French Alliances will contribute to the development of higher education and scientific research in the field of humane and social sciences. With AVIESAN, ANCRE, ALLISTENE and AllEnvi, France has an alliance in each priority area identified by the National Strategy for Research and Innovation plan.

ATHENA has four key players in French research: the National Centre for Scientific Research (CNRS), the Conférence des Grandes Ecoles (CGE), the Conference of University Presidents (CPU), the National Institute of Demographic Studies (INED). The creation of this alliance is part of the French research system reform which aims to open up relations between the actors, developing initiatives for coordination and partnership.

The Minister of Research, Valérie Pécresse, recalled that the National Strategy for Research and Innovation plan had placed the humane and social priorities at the heart of structuring the scientific development of France. She also said that having an alliance in the field of humane and social sciences, France had now an Alliance in each of the thematic priorities for research: the National Alliance for Life Sciences and Health (AVIESAN), the National Alliance for Research Coordination Energy (ANCRE), the Alliance of Digital Science and Technology (ALLISTENE), and the Alliance "Food, Water, Climate, Territories" (AllEnvi).

ATHENA Alliance aims to develop ways to strengthen reception facilities for the scientific quality (Institut Universitaire de France, Chairs of Excellence, Institute for Advanced Studies, Houses of Humanities, etc.) and make proposals to develop the interfaces and cooperation between research actors in infrastructure and large research facilities such as libraries and/or digitization.

*Sources: July 2010  
Valérie Péresse's speech - June 22, 2010  
CNRS Web site*

### **9.7 Cooperation Agreements Between The French AERES And Russian NCPA And Kazakhstan NAC Agencies (France)**



From June 21 to 24, 2010, the French Agency for Evaluation (AERES) hosted a dozen representatives of the National Accreditation Centre of Kazakhstan (NAC) and the National Center for Public Accreditation in the Federation of Russia (NCPA).

This meeting, organized in conjunction with the International Centre for Pedagogical Studies (CIEP) ended with the signing of a cooperation agreement between the AERES, Russian and Kazakh agencies.

To promote the exchange of good practices in terms of quality assurance, these two agreements provide for:

- Providing information on the procedures used in the evaluation of training and higher education institutions
- Promoting initiatives for greater compatibility, transparency and equity of evaluation procedures and the establishment of effective quality assurance systems
- Exchange of experts in making quality assurance practices in different disciplines.



Another highlight of the meeting: Representatives of the NAC and NCPA also signed an Agreement of Cooperation.

*Sources: July 2010  
AERES Web Site, July 21, 2010*

### **9.8 The 2010 Taste for Sciences Prize (France)**

The French Ministry for Higher Education and Research announces the second edition of the Prize "Taste for Science". The third award category of this prize is entitled "Scientists communicate" and recognizes the communication initiative of a team, a research laboratory, or an individual who found creative ways to effectively disseminate individual or collective research work to a broad public. Registration is open until Wednesday, September 15, 2010 (at midnight).

Created in 2009, the "Taste for Science Prize" showcases the scientific community and highlights popular science initiatives and cultural products that are intended to reach out and inform as many people as possible about scientific work. With this award, the Ministry recognizes researchers who, throughout the year, try to address the key challenge of reconciling science and society. It also aims to encourage a taste for knowledge and scientific vocations.

*Sources: August/September 2010*

*Details regarding registration are available at:*

*[Candidature Web Site of the Ministry for Higher Education and Research \(M.E.S.R.\)](#)*

*Full article is available (in French) at:*

*<http://www.enseignementsup-recherche.gouv.fr/cid52392/prix-le-gout-des-sciences-2010.html>*



### 9.9 AERES Evaluated by the ENQA (and recognized!) (France)

On September 2, 2010, the European Association for Quality Assurance in Higher Education (ENQA) formally recognized the high quality of France's Evaluation Agency for Research and Education (AERES), as well as its experts and staff.

As a promoter of self-assessment and quality management as measures of change among the institutions they evaluate, AERES undertook its own evaluation last April. According to the agency, a culture of quality must go beyond compliance assessment and move towards innovation.

Three years after its creation, the agency has earned its autonomy by an impressive number of assessments, a quality framework and an assessment guide that reflects the diversity of structures that it evaluates, an active contribution to the development of a culture of quality within schools, and an efficient information system -- all assets recognized by the ENQA. This recognition reinforces the credibility of the agency and of the French Higher Education system among both students and work force in Europe.

The evaluation was organized by the Spanish ANECA agency on behalf of ENQA, the European network of evaluation agencies implementing the quality standards required for higher education under the Bologna process (Standards and guidelines for Quality Assurance in the European Higher Education Area - ESG).

*Three major steps were followed:*

- self-evaluation of the agency in a report which describes the state of its practices and a 2010 improvement plan in line with its 2014 strategic plan;
- the visit of a committee of international experts to AERES\*;
- the ENQA decision after analyzing the report of the "Experts' Committee Evaluation"

*\* ANECA Experts Panel:*

- *President: Francisco Marcellán, Spanish, Mathematics Professor at the University Carlos III of Madrid, ANECA director.*
- *Secretary: Jacques l'Ecuyer, Canadian, Physicist, Founder and President of the Evaluation Agency in Québec.*
- *Guy Aelterman, Belgian, Engineer, General Director of the University of Anvers Artesis, vice-president of the Flemish Evaluation Agency.*
- *Françoise Bévalot, French, Professor in Pharmaceutical Sciences, president of the University Franche-Comté, member of the Committee following up the Law on University Autonomy.*
- *Michel Zink, French, Professor of Medieval Literature, member of the Institute, Professor at the College de France.*
- *Marta Norah Sanz, Spanish, PhD student in Physics.*

*Sources: October 2010*

*AERES Web Site:*

<http://www.aeres-evaluation.fr/Actualites/Actualites-de-l-agence/L-AERES-evaluee-et-reconnue-par-l-ENQA>

### 9.10 French education slammed for 'stifling curiosity'

The French education system is killing creativity, according to a Paris-based academic who told a conference on innovation that teachers there "have become masters at destroying confidence".

Soumitra Dutta, professor of business and technology at INSEAD business school in Paris, said the US produces more creative students and makes outsiders feel more welcome – factors which help explain why the US is still more innovative than Europe.

"French schools have become masters in destroying confidence. They take a child and pummel them, insisting that they copy word-for-word what the teacher has written on the blackboard," he told a conference organized by the American Chamber of Commerce in the EU (AmCham EU) in Brussels last



week (8 October). He said his own daughter had been brow-beaten by the French school system, whereas the American system encourages creativity and tells children that it is okay to make mistakes. "We have to become better at inspiring young people and giving them role models who have made it as entrepreneurs and innovators. At the moment, we're not very good at supporting creativity," said Dutta. He said Europeans are as innovative at birth as others but "somehow as they grow up their curiosity is stifled". Even the European university system lags behind the US because they are "stuck in the middle ages" and need reform, according to the professor, who has taught on both sides of the Atlantic. Dutta warned that the EU and US have fewer young people going into science and technology compared to developing countries, where participation in maths and sciences remains strong. Also key to fostering innovation is welcoming foreign talent. He said it is considerably more difficult to adjust to life in Europe compared to Silicon Valley, where newcomers are made to feel at home.

#### *US business wants European reform*

AmCham, which speaks for American multinationals, is demanding reform of Europe's tax system to eliminate incentives for early retirement and boost labour participation. The US business lobby has published a new paper designed to diagnose and address Europe's innovation deficit. Many of the ideas reflect those included in the EU executive's Innovation Union document last week (6 October). AmCham wants to see Europe's education system reformed to incorporate business skills into courses in science, technology, engineering and mathematics. They want to encourage more internships to help students gain hands-on experience in industry and establish business-run schools or academies. The plan also backs the idea of a government-sponsored social investment bank, which would help civil society to get projects off the ground as well as providing advice and support to attract private investment.

*Sources: October 2010*

*Full article available on Published: 11 October 2010*

<http://www.euractiv.com>

#### **9.11 Five Universities Sell Property for Upgrade Funds (France)**

Valérie Pécresse, Minister of Higher Education and Research, met with the presidents of nine universities who have requested the transfer of real estate belonging to the State. She announced that the 5 most advanced universities (Clermont 1, Corte, Paris 6, Poitiers and Toulouse 1) would engage in final negotiations with the State with the aim of devolution of wealth by next year. For these five institutions, the transfer of real estate represents an area of nearly 5 million sq.meters worth more than 1.366 billion Euros.

The five universities were part of an experiment group of nine (Paris 2, Marne-la-Vallée, Cergy, Avignon) established in May 2009 and selected after a long period of preparatory work. Over an 18 month period they developed a real estate strategy, established a team in charge of real estate management, and determined the scope and value of the assets to be transferred and the security requirements.

The minister said the next steps will involve the 3 selected universities (Clermont 1, Poitiers and Toulouse 1) in making the necessary financial and legal arrangements for the transfer.

The Minister said the transfer will be financed by the State and will consider projects and activities of each university to best meet the needs of each institution.

Regarding other candidate universities, the Minister added that they are encouraged to continue financial discussions. Paris 2, Cergy, Marne-la-Vallée, and Avignon are working towards devolution of their heritage by 2012.

Finally, the Minister recalled the exceptional effort by the State to support university buildings: 2.7 billion Euros in real estate investments between 2007 and 2010, plus 5 billion Euros for Campus Operation. In addition she said that the state had invested more than 1.8 billion Euros for these 9 universities.

*Sources: November 2010*

*French Government web site, November 5, 2010*

### 9.12 French brains prefer U.S.

*According to the Institut Montaigne Report, the Exodus of Scientists and Economists is Most Acute.*

We are accustomed to deploring the lack of mobility of young French people and their lack of enthusiasm for study abroad. The situation is improving, but a report published by the Institut Montaigne tends to dampen enthusiasm for this recognition of French students going abroad. Young people who spend a year in the U.S. during their studies tend to like it there. Worse, these are among the best researchers who often finding in the States conditions they do not find in France. The report, written by Ioanna Kohler, director of social policy programs at the French-American Foundation in New York, is entitled "Gone for Good? Expatriates of French higher education in the United States", and shows an unattractive picture of French research careers for those trained in France.

Certainly with 1.3% of its expatriate researchers in the United States, France is not only below the European average but far behind the United Kingdom (3%) and Italy (2.5%). However, this figure is steadily increasing. And most importantly, the number of French researchers who emigrated to the United States rose from 8% in 1970 to 27% between 1996 and 2006.

French youth who obtain a doctorate in the United States overwhelmingly remain in the U.S. As for post-doctoral fellows who received their PhD in France, 50 to 55% go abroad, a third of them to the United States. Seventy five percent of young researchers consider it "easy" or "fairly easy" to find employment in the United States, compared to only 30% who respond similarly regarding finding a job in France.

The Institut Montaigne report describes a qualitative study of the type of researcher who tends to emigrate and each year France loses her best and brightest, those who could enrich the country intellectually and economically. Beyond anecdotal evidence on the mass expatriation of French music composers, the report indicates that economists, biologists and mathematicians are also leaving. Worse, among these researchers are former students from the best high schools, polytechnics or most prestigious public schools, who cost the most to educate, as well as those holding prestigious professorships. Among the exiles, many would be willing to return to France if wages, administration, and facilities were more attractive.

Administrative delays in recruitment procedures in France is one factor inhibiting returning as well as lack of information for young expatriates and foreign researchers on the opportunities offered in France [2]

The report of the Institut Montaigne [2] does not claim that French university should model its organization on an international standard that would embody modernity. It appears instead that the French institutions are struggling to make their assets.

[1] Survey conducted in 2005 by the Scientific and Technology Embassy of France to the United States of young researchers who followed a post-doctoral training in North America

[2] Gone for Good? Expatriates of the French higher education in the United States, Ioanna Kohler STUDY - November 2010 – available upon request

*Sources: November 2010*

*Le Figaro, November 17, 2010*

### 9.13 Launch of the Search Engine Isidore (France)

**Isidore** was launched on December 7th, 2010 by TGE-ADONIS (Unified Access to Data and Digital Records of humanities and social sciences) of the CNRS (*Centre National de la Recherche Scientifique*).

What is Adonis? It is to the humanities and social sciences the same "very large equipment" that the LHC is to physics.

And what's Isidore? As the son of Adonis, who was loved by Aphrodite, it must be a fine achievement. And it is.

This is not a commercial search engine, it is **THE** research search engine - at least for humanities and social sciences.

Specifically, Isidore [harvests](#) links from many digital libraries, as [Gallica \(French National Library\)](#), or the [Numdam](#) site for the mathematical journals (History of Science), or the [revues.org](#) site for journals in humanities, or others such as those listed by [NUMES](#) (from the ABES, the Bibliographic Agency for Higher Education).

Unlike a commercial search engine, Isidore will search only through its content: even if there [are](#) not any interesting results, research is not [contaminated](#) by irrelevant results, as may be the case with a commercial search engine. That, at any rate, is the extension of the idea that the authors have been developing since 2004 on the [www.science.gouv](#) site, [an](#) internal search engine among thousands of sites listed. One [can](#) also find on Isidore [a](#) mini-profile for sites listed, which is a good guide for users.

With various digital research libraries on research gathered together, one sees a continuum between popular science and qualified scientific digital libraries. The later represents a quality web where one can search for relevant information without being deprived of conventional search engines.

One advantage of Humanities and Social Sciences (HSH) being Isidore's main focus is that information is more readily identifiable (written in French and lay-language) than in the hard sciences and therefore more accessible to the non-researcher visitor.

Finally, each day a specific Humanities and Social Sciences area will be highlighted on the home page, with the first results from the research-- what you can learn from just a glance at demography, geography, history of science, etc.

We recommend trying Isidore on a topic that interests you or that you are familiar with and then use it -- without restraint.

*Sources: December 2010*

<http://www.science.gouv.fr/fr/actualites/bdd/res/3834/lancement-du-moteur-de-recherche-isidore>

#### **9.14 Investment for the Future: 680 projects submitted (France)**

Nearly 680 projects were submitted for the first 5 calls for projects under the "Investment for the Future" program. This high [response](#) reflects both the enthusiasm of the research teams, as well as the ability of researchers to work together to build unprecedented cooperation around scientific projects.

Valerie Pécresse, Minister of Higher Education and Research, [emphasized](#) that:

- higher education and research are a priority for the French Government;
- these sectors are exempt from the requirement of non-replacement of one position out of two and will have their jobs secured over the period 2011-2013;
- the budget for higher education and research has increased [20%](#) in 4 years;
- the € 22 billion, or nearly two-thirds of the Investment for the Future program, comes [in](#) addition to budgetary allocations;
- for example, the CNRS has seen its budget increases by 14% in 4 years

The Minister stresses that future investments are an effort of unprecedented magnitude, which will allow most innovative projects to find funding. Furthermore, this effort will not affect any existing research structures, such as joint research units.

The minister also recalled that in choosing to use calls for [proposals](#), the Government [indicates its confidence in](#) the research community. In fact, it's from the academic and scientific community that the strongest and most original ideas will emerge. Researchers understood that by [proposing](#) projects throughout the country in all disciplines (e.g. over 25% of projects submitted by laboratories of excellence are related to the humanities and social [sciences](#)). Finally, the academic and scientific community will

evaluate the projects through international referees, as is the case in other countries that have launched similar initiatives.

She concludes by saying that a total of € 3.6 billion will be invested in 2011 in to the Investments for the Future program.

*Sources: December 2010*

*Press release - Valérie Pécresse*

*Full article available at:*

<http://www.enseignementsup-recherche.gouv.fr/cid54241/investissements-d-avenir-680-projets-recus.html>

### **9.15 Creating the "PIBS" – Good News for Biodiversity Research (France)**

Valerie Pécresse welcomes the resolution passed by the General Assembly of the United Nations to pursue the creation of the intergovernmental scientific platform on biodiversity and ecosystem services (PIBS).

For the Minister, this decision is great news for protecting biodiversity. France has shown a commitment to biodiversity in recent years, including the organization of a Conference on "Biodiversity: Science and Governance" at UNESCO in Paris in 2005. France called for the creation of an independent expert International Panel on Biodiversity (similar to the one on climate change) to develop international policy on biodiversity, providing a link between the scientific community and policy makers. The platform on biodiversity will help establish policies for the protection and sustainable management of biodiversity on globally shared sound science.

The creation of this new platform for biodiversity is also good news for French research and researchers, whose expertise is internationally recognized. Valerie Pécresse knows she can count on their mobilization to support this project and ensure its success. She noted that the investment for the future, devoting nearly 22 billion Euros to higher education and research, provides a great opportunity to support research on the environment, and biodiversity in particular.

Finally, the Minister hopes that PIBS becomes operational as quickly as possible, including the organization of its first plenary meeting, as requested by the General Assembly of the United Nations during the United Nations Program for Environment. She has renewed France's offer to host the secretariat of IPBES in Paris at Musée de l'Homme, as she previously suggested at the conference in Putraya (Malaysia) in November 2008. She also recently instructed the Foundation for Biodiversity Research (FRB) to prepare input and engagement of the French scientific community towards PIBS.

*Sources: December 2010*

*Valérie Pécresse's press release, December 21, 2010*

*Full article available at:*

<http://www.enseignementsup-recherche.gouv.fr/cid54321/creation-de-la-plate-forme-pibse-une-bonne-nouvelle-pour-la-recherche-sur-la-biodiversite.html>

### **9.16 An agreement to strengthen scientific and industrial collaboration (France)**

The CNRS, CEA and SOLEIL (a synchrotron facility located outside Paris) signed an agreement on December 21, 2010, for scientific and industrial collaboration with the Association of Industrial Partners of Major Scientific Equipment (PIGES). PIGES brings together French companies of all sizes involved in research, development and implementation of advanced instrumentation, necessary to Very Large Equipment and Research Infrastructure (TGEIR). The main objective is to strengthen the synergy between business and academic research in the field of research infrastructure and R&D in nuclear and high energy physics and around the very large radiation facilities such as synchrotrons.

*Full article available at:*

<http://www2.cnrs.fr/presse/communiqu/2061.htm>

*Paris, December 22, 2010*

### 9.17 The Research and Higher Education Cluster HESAM (France)

Valerie Pécresse (French Minister for Research and Higher Education) signed the agreement for the Research and Higher Education Cluster called HESAM (*Hautes Etudes - Sorbonne - Arts & Crafts*) with representatives from 12 institutions. This agreement comes with an endowment of two million Euros.

#### The 9 Founders are

- Paris technology arts and crafts (*Arts et Métiers ParisTech*)
- The National Conservatory for Arts and Crafts
- The French School of Far East
- The School for Higher Education in Social Sciences (*École des Hautes Etudes en Sciences Sociales*)
- The National School of Chartres (*Ecole Nationale de Chartres*)
- The Practice School for Higher Education (*Ecole Pratique des Hautes Etudes*)
- Ecole Supérieure de Commerce de Paris
- The National School of Industrial Design
- University Paris 1 Panthéon-Sorbonne

#### The 3 Associate Members are:

- The National School for Administration (*Ecole Nationale d'Administration - ENA*)
- The National Institute for Art History
- The National Heritage Institute

The Minister warmly welcomed the participants in the establishment of this third PRES anchored inside the city of Paris (this follows the creation of 'the Paris City' and 'Sorbonne University' clusters) for their work and commitment to this common approach. She welcomed the emergence of a social sciences project of this scope. She also emphasized that the PRES is particularly noteworthy in the scientific and educational domains, broadening not only to the arts, humane sciences and society, literature and language, but also to engineering.

For the Minister, the establishment of this new Parisian PRES will help to make Paris one of the most prestigious university cities in the world. She added that the construction of PRES in Paris must be accompanied by an effort to ensure the consistency of the training map within each PRES for proving accessibility to all students.

Finally, she assured members of the PRES of the state's support in the implementation of a common real estate strategy as part of the Campus Operation in Paris, especially with the Condorcet Campus. She added that many institutions will benefit from some of PRES operations in support of student life that will be conducted by *Epaurif* (the public institution responsible for University planning in Ile-de-France).

*Sources: December 2010*

<http://www.enseignementsup-recherche.gouv.fr/>

*Full article available at:*

<http://www.enseignementsup-recherche.gouv.fr/cid54179/hesam-le-nouveau-pole-de-recherche-et-d-enseignement-superieur-parisien.html>

*Press release by Valérie Pécresse, French Minister for Research and Higher Education*

*December 7, 2010*

## 10 Germany

### 10.1 Germany Boosts University Funding by Additional €13 Billion

Following a strike launched early in the semester by students from several German universities, an education summit was held on December 17, 2009. It was decided to invest €13 additional billion by 2015, 40% of which will be guaranteed by the federal government. The summit brought together the Federal Minister of Education and Research Annette Schavan, Chancellor Angela Merkel, the Länder

Ministers of Education, the Conference of University Presidents (HRK) and the main student associations.

In 2009, approximately €158 billion was invested in education in Germany. The goal of investing 10% of GDP in the areas of research and education by 2015 was reaffirmed by the government (7% for education, 3% for research).

*Sources: January 2010*

*Electronic Bulletin, January 6, 2010*

*Handelsblatt newspaper – December 17, 2009*

## **10.2 Three German Communities selected by the European Institute of Technology**

The European Institute of Technology (EIT) has selected research institutions in Germany for each of the three Communities of Science and Innovation (Knowledge and Innovation Communities: KIC). The three KIC groups of European researchers working on a common theme will receive a budget of €308 million through 2013. The distribution of the allocation of funds among the 3 KIC will be decided in the coming months. The aim of this project is to form a triangle linking European Science Education, Research, and Innovation to create interactions within a thematic network. The first three KIC are in Innovative Energy, EIT ICT Labs and Climate.

### *Climate KIC*

The goal is to find new ways to cope with future climate change. The network is spread across 5 regions: London, Zurich, the Berlin area, Paris region, and urban Holland (Randstad Holland: Utrecht, Amsterdam, Rotterdam, etc.). Among the German Academic players are the Potsdam Institute for Research on the consequences of climate change (Potsdam-Institut für Klimafolgenforschung, PIK), the Technical University of Berlin (TUB), the Technical University of Munich (TUM), the "Klimacampus Hamburg", the Research Center for Geosciences (GFZ) in Potsdam and the Research Center in Jülich. The economic and political actors are represented by the Bayer Company, Beluga Shipping, SAP Valley Solar, RWE, Deutsche Bank AG and Schott, and the regions of Berlin-Brandenburg and Hesse. For France, Paristech, CEA (Commissariat à l'Energie Atomique) and Météo-France are involved.

### *KIC InnoEnergy:*

The aim of this community is to improve the use of renewable energy in businesses and society. The initiative was launched by the Institute of Technology Karlsruhe (KIT). European regions of Baden-Wuerttemberg, Grenoble, Barcelona, Eindhoven-Leuven, Krakow and Stockholm are involved in the project, for a total of 35 partners. In Germany, in addition to KIT, partners include the University of Stuttgart and the companies EnBW and SAP. France is represented by the Total Group, EDF (Electricité de France) and CEA.

### *EIT ICT Labs*

The aim is to extend Internet services in Europe as part of a community of knowledge. Geographically different centers are located in Berlin and Munich, Paris, Stockholm, Eindhoven and Helsinki. The innovation part is attributed to Berlin/Munich (TUB, Fraunhofer Society, German Research Center for Artificial Intelligence, Siemens, SAP and Deutsche Telekom), the research component will be managed by Paris (Université Pierre et Marie Curie-Paris 6, Université Paris Sud 11, Institut Telecom-Paris, INRIA, Alcatel-Lucent, France Telecom, Thomson, Thales). The training part will be located in Stockholm (KTH-Stockholm, Ericsson, TeliaSonera). The Helsinki site (Nokia, TKK-Helsinki, TeliaSonera) will focus on the users' needs, and Eindhoven (Netherlands Institute for Research in ICT 3TU / NICT-IL, Philips) on health and well-being.

All three programs will start in March 2010.

*Sources: January 2010*

*- Electronic Bulletin, January 6, 2010*

*- EIT web site: <http://eit.europa.eu/>*



### 10.3 Munich at the Center of European Research on Climate and Information Technology (Germany)

Technical University of Munich (TUM), through its participation in two new innovation projects and research throughout Europe and with a budget of €100 million, has positioned itself as a strategic point for the development of both climate mitigation and the future of information technology. Communities of Science and Innovation (Knowledge and Innovation Communities: KIC), created by the new European Institute of Technology (EIT) is a program of long-term financing of innovation, with funding partly from industry (about €600 million by KIC – *see above article*) and the European Union (about €120 million), which will be spread over a period of seven years. The TUM and the Technical University of Berlin (TU Berlin) are the only German universities whose applications have been received successfully for two KIC.

The selection of KIC was conducted at the European Institute of Technology following sophisticated requirements. The different KIC partners must be able to find, both in science and the economy, new forms of cooperation leading to specific research programs and the development of innovative practices and their implementation in industry. The participation of KIC-TUM Climate has been realized thanks to its skills in electro-mobile materials (Chair for Technical Vehicles, Prof. Heisenberg and Prof. Bernd. Markus Lienkamp), energy efficient buildings (Chair for the Physical Construction, Prof. Gird Hauser) and eco-climatology (Prof. Annette Mensal).

Within the Climate-KIC, the TUM will evolve further with three research partners in Germany (Potsdam Institute for Research on the consequences of climate change, the Research Center for Geosciences in Potsdam and Berlin TU) in a European consortium, and ten industrial partners, and work on topics such as finding new solutions to reduce emissions in cities or the control of vegetation to improve the climate. *"In parallel research, new courses are developed around the industry, and scientists offering innovative ideas will be supported financially,"* explains Ulrich Stemming, physics professor and coordinator of KIC activities at TU Munich.

Another KIC entitled **"EIT CIT Labs"** has also been established in the field of information technology in order to develop new IT services. The German community, formed around Berlin and Munich, will help make Europe a world leader in information technology and communication. TU Munich will provide its advanced expertise in the field of cyber-physical systems: *"Future services should take into account the communication of physical information, such as the possibility of knowing the temperature at specific locations from the Internet. Motorists will be informed about weather and traffic on highways"*, said Professor Manfred Bray Institute of Informatics TUM, also head the Center for Digital Technology and Management (CUT), in charge of issues relating to cyber-physical systems in Munich.

The German partners of TUM in the KIC EIT CIT labs are Deutsche Telekom AG, TU Berlin, the Fraunhofer Society, the German Research Center for Artificial Intelligence (DIKE), the companies SAP and Siemens.

*Sources: January 2010*

- *Electronic Bulletin, January 6, 2010*

- *EIT web site: <http://eit.europa.eu/>*

- *TU München, official web site: <http://portal.mytum.de>*

- *Official web site of the Bavarian Ministry for Sciences, Research and Arts:*

*<http://www.stmwfk.bayern.de/Presse/PressemeldungenDetail.aspx?NewsID=2155>*

### 10.4 Five Spitzenclusters Announced (Germany)

The Federal Minister for Education and Research, Annette Schavan, announced Tuesday, January 26, 2010 the winners of the second phase of the Spitzencluster initiative. An independent panel, headed by Prof. Andreas Barner, spokesman for the management of Boehringer Ingelheim GmbH, has selected five clusters from the list of ten finalists announced in June 2009.

The Minister announced that "funding for these five second generation clusters is expected to total 200 million Euros over five years." She added that "with the support of the most successful clusters, bringing together actors from the scientific and economic world, but also other regional partners, the government

gives a strong signal in these times of crisis, growth, innovation and employment security in the long term, demand cooperation between scientific institutes and businesses."

The winners of the second phase particularly impressed the judges with their ideas, their performance, their methods and the quality of interactions between different clusters of actors (research facilities, private investors and business world). Prof. Barner said that "the capacity for innovation, high growth potential and the tremendous creative engagement of the five clusters have been impressive. The competition between different candidates and their regions has created a new atmosphere and sustainable mobilization that will last beyond the selection phase."

The Minister reiterated that *"with the assistance of Spitzenclusters as flagship of the high-tech strategy implemented by the Federal Government, we occupy a leading role in European politics for creating Clusters."*

With the first five clusters selected in 2008, the number of clusters supported by the government grows to ten. For this second phase of the competition applications had been received from 23 clusters.

The five clusters selected this year are the "Software Cluster" in Darmstadt, Kaiserslautern, Karlsruhe, Saarbrücken and Waldorf; the "Munich Biotech Cluster - m4" and "Medical Valley Europäische Metropolregion Nürnberg" in Bavaria, the "MicroTEC Südwest" in Baden-Württemberg and the "EffizienzCluster LogistikRuhr" of the Ruhr area.

*Sources: January 2010*

*Electronic Bulletin, January 27, 2010*

### **10.5 Future of Energy to be Highlighted in The Year of Science 2010 (Germany)**

The Year of Science 2010 will be focused on the future of energy -- the energy mix of tomorrow, German energy supply for the coming decades, and the shift to renewable energy sources. The Federal Ministry of Education and Research (BMBF) focuses on the future of energy with many scientific and economic partners. *"The support for energy research is a priority of our research policy. The Year of Science must contribute leadership within companies as they discuss new solutions and concepts for future energy supply,"* said Annette Schavan, Federal Minister of Research, at the January 25 presentation of the Year of Science 2010 in Berlin.

The BMBF is supporting this year's energy research with more than 400 million Euros in subsidies, a 10 percent increase over the previous year. Research in the areas of energy efficiency and renewable energy will be particularly supported. In these areas, support from the department increased by 30% compared to 2009. Accounting for more than 40% of the overall budget, these disciplines receive the largest share of BMBF funding. The New Year of Science is as interested in energy research as ecology, economics and social issues. It is essential that direct dialogue is conducted between the various players in the field of energy and that *"politicians and scientists manage to convince people of their plans for the development of sustainable solutions for energy supply in the future"* adds Schavan.

The Years of Science are an initiative of the BMBF in cooperation with "Science in Dialogue" (WiD), the Helmholtz Centers, and numerous partners from the research, science and business communities.

*"Engineers and scientists are working intensively to create reliable and cost-effective solutions that are particularly sensitive to climate issues. These involve the expansion of renewable energy sources and the development of modern power stations and intelligent networks,"* says Prof. Eberhard Umbach, Vice-President of the Helmholtz Society in energy and president of the Karlsruhe Institute of Technology (KIT).

Many events are planned throughout the Year of Science. On Energy Day -- September 25, 2010 -- research institutes, universities, businesses, museums and many partners will open their doors to give an overview of their approaches to energy research. The Year of Science is aimed primarily at children and adolescents. A first for the Year of Science is the creation of an online research stock market, a platform bringing together schools and scientific players. Classes can contact researchers to invite them or visit them in their work environment. In May, researchers on the exhibition boat MS Science researchers will

begin exhibiting their work in over 30 German cities. The novelty this year will be a "Dialogue on the Bridge" forum, which will address various energy topics. With competition for students on the theme "Energy for Ideas", the BMBF will seek the best project ideas for a public dialogue about the future energy. Students from universities and colleagues can register to deliver their proposals. Fifteen projects will be selected and each will receive 10,000 Euros for the subsequent implementation of their ideas.

*Sources: January 2010*

*Electronic Bulletin, January 27, 2010*

#### **10.6 Max Planck Opens a Center in India (Germany)**

On Wednesday, February 3, Horst Köhler, president of the German Republic and Pithviraj Chavan, Indian Minister of Research, opened the new Max Planck Institute for Computer Sciences in the Indian Institute of Sciences (IIS) in Delhi. Initially, six research groups will be established and in 2011 four research groups currently working in various Indian cities will be relocated at the new center.

The new center is part of the internationalization strategy of the Max Planck Society (MPG). The head of MPG in Delhi said that "India is playing an increasingly important role in international scientific cooperation". Indeed, more and more Indian researchers are working on themes common to both institutions.

For the next five years, the center will receive a total of 4 million Euros in grants, including 900,000 Euros from MPG, 1.1 million from the Federal Ministry of Education and Research (BMBF) and two million from the Indian Department for Science and Technology (DST). This program aims to encourage the exchange of post-docs between the two countries, particularly in the context of schools such as the International Max Planck Research (IMPRS). With 120 students in the IMPRS program, India represents the largest number of non-German students. At the same time, nearly one in ten foreign doctoral students at the Max Planck Institutes is of Indian nationality. In 2008, 557 young Indian scientists were invited to pursue research at MPG and the last 5 years have seen an 80% increase in the number of Indian researchers at the Max Planck Society. MPG continues to follow the Indian scientists after their return to their countries to establish a lasting relationship which will benefit both countries.

*The six new research teams are:*

- Algorithms Group at the Indian Institute of Technology (IIT) in Delhi, in partnership with the Max Planck Institute for Informatics.
- Graphics and Vision Group in partnership with the Max Planck Institute for Informatics.
- Data Management Group of IIT Mumbai in partnership with the Max Planck Institute for Informatics.
- The IIT Network Group of Madras in partnership with the Max-Planck Software System.
- The IIT Algorithms and Complexity Group, Kanpur, in partnership with the Max Planck Institute for Informatics.
- Algorithms Group at the Tata Institute of Fundamental Research in Mumbai in partnership with the Max Planck Institute for Informatics.

*Sources: February 2010*

*- Electronic Bulletin, February 3, 2010*

*- IDW article, press release from the Max-Planck – January 29, 2010 - <http://idw-online.de/pages/en/news353349>*

*- "Indische Perspektive für Forscher", Tagespiegel – February 2, 2010*

#### **10.7 Two Bavarian Groups Among Five Clusters of Excellence Winners (Germany)**

Two Bavarian clusters were selected among the five winners of the Lead Cluster competition. They are the "Munich Biotech Cluster - m4" from Munich and the "Medical Valley Europäische Metropolregion Nürnberg". Other winners were the "Software Cluster" and "EffizienzCluster LogistikRuhr", located in Hesse, and "MicroTEC Südwest" in Baden-Wuerttemberg. This selection of clusters of excellence, designed to support the most promising clusters in the High-Tech framework Strategy of the Federal Ministry of Education and Research (BMBF), will have a total 200 million Euros for the five clusters over five years. This support will allow winners, selected according to criteria of research excellence,

development and innovation, to put into practice their ideas and concepts.

#### *"Munich Biotech Cluster - m4"*

This cluster is part of the Munich Network "Bayern Biotechnology Cluster", which also has branches in Regensburg, Nuremberg / Erlangen and Würzburg / Bayreuth. The network is coordinated by a common agency, Biomass Biotech Cluster Development GmbH, which provides further support for biotechnology development and business creation in the Munich area.

The Munich Biotech Cluster is a major player in Germany in the fields of biotechnology, pharmaceuticals, and therapeutics and diagnostics development. It comprises approximately 20,000 employees in 350 companies, seven of which are publicly traded (4SC AG, Bavarian Nordic GmbH, GPC Biotech AG, MediGene AG, Micromet AG, MorphoSys AG, Wilex AG). In addition to scientific institutes, it involves the Ludwig-Maximilians-Universität Munich (LMU), Technical University of Munich (TUM), the Helmholtz Association, the Max Planck Society, in addition to the graduate school of Munich and Weihenstephan.

#### *"Medical Valley Europäische Metropolregion Nürnberg"*

This cluster, based in the Nuremberg region, employs around 16,000 employees in 180 companies specializing in medical technology. Among these companies are Siemens Healthcare, with headquarters in Erlangen, Biotronik, and Peter Brehm. In addition to scientific institutions, the Fraunhofer Society, the Max Planck Society and the Transnational Research Center and University of Erlangen-Nuremberg are partners. The themes addressed by this cluster cover areas such as medicine and personalized therapy, development of diagnostics, and telemedicine.

*Sources: February 2010*

- *Electronic Bulletin, February 3, 2010*

- *Press release from the Federal Government – January 26, 2010 - <http://www.hightech-strategie.de/de/468.php>*

- *Web site for the Biotech cluster: <http://www.bio-m.org/index.html>*

- *Web site for the Medical Valley Europäische Metropolregion Nürnberg : <http://www.medical-valley-emn.de/>*

### **10.8 Two Million Euros for Five Tech Transfer Projects (Germany)**

The Federal Ministry of Economics and Technology (BMWi) has awarded a second allocation of two million Euros to five projects in higher education and research institutions in the SIGNO-Universities program.

The program aims to support research teams in technology transfer and exploit research results and intellectual property more effectively by optimizing relations between universities and businesses. This funding is part of the third year of support started in January 2008. The two previous efforts (2001-2003 and 2004-2007) helped establish agencies for tech transfer (PVA: Patent-und Verwertungsagentur). In 2002 the general law of employee inventions (ArbNErfG) was amended to provide rules for universities. The purpose is to allow universities to enhance the discoveries of their teaching staff as well as provide financial support for transferring research results to third party developers.

One of the selected projects aims to create new channels whose purpose is to supplement with new funding value chains, and thus to turn inventions into marketable products.

*Sources: February 2010*

- *Electronic Bulletin, February 11, 2010*

- *PVA network: <http://www.technologieallianz.de>*

### **10.9 Germany to Provide Two billion Euros for Sustainable Development Research**

Annette Schavan, Federal Minister for Education and Research, announced on February 2, the establishment of a new framework program, "Research for Sustainable Development" ("Forschung für nachhaltige Entwicklungen") which is a continuation of the previous framework program that will make available more than 2 billion Euros.

The new program reflects Germany's desire, following the failure of the Copenhagen negotiations, to engage more intensely in the fight against climate change and enable sustainable development. Schavan said that time is running out and the next decade will be decisive in facing the "unprecedented" challenges climate scientists predict. *"We must quickly develop strategies and appropriate instruments. I am convinced that begins the decade of research must begin now!"* said the Minister in her announcement.

The new Framework Program for Research on Sustainable Development "covers a broad spectrum of projects, including energy efficiency and optimal performance of non-renewable raw materials as central themes. Other objectives of the framework program are the development of adaptation strategies to climate change and a new research infrastructure. Furthermore, international cooperation, especially with emerging countries and countries in the developing world, are a priority in the new initiative.

The program framework includes 3 new themes that reinforce the political support of the BMBF. First, cooperate with countries in the developing world. Germany wants to help African states to combat climate change and implement sustainable development techniques. For this, collaboration between African and German researchers should be strengthened. Similarly, African centers of competence should be created in the coming years. BMBF support on this point could rise to 95 million Euros.

Second, support countries in the emerging field of research on sustainable development. The BMBF aims to increase scientific cooperation with emerging countries. A priority is the success of the "two degrees" objective for limiting global warming. The BMBF will soon introduce a new initiative in designed states "BRIC" (Brazil, Russia, India, China, and South Africa) who will receive funding of 60 million Euros.

Third, a better understand the Earth system [2]. By studying the relationships and interactions between land, oceans, biosphere, atmosphere, and glaciers, scientists can better understand climate change and develop appropriate coping strategies. In addition to supporting basic research, the BMBF will also promote the creation of new infrastructure and large instruments. The German research fleet will receive funding of 650 million Euros for the next six years.

Through this new program framework, Germany intends to consolidate its leading position in the field of sustainable resource management and environmental technologies and innovative energy. It is a continuation of the previous framework program, FoNa, which attracted 800 million Euros over the period 2004-2009. In the new period 2010-2015, the budget allocated to the new program has been more than doubled, reflecting the commitment of Germany in the field of sustainable development.

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- [1] FoNa program was a five-year framework (2004-2009) flanking the BMBF research on sustainable development (Forschung für Nachhaltigkeit - FoNa). Until 2009, the BMBF allocated to this program 800 million Euros, representing an annual budget of 160 million Euros for 5 years to support innovation for sustainable development.

- [2] Within the previous framework program 2004-2009 FoNa had already the theme "Earth System".

Sources: February 2010

Electronic Bulletin, February 11, 2010

<http://www.fona.de/>

#### **10.10 20 million Euros for cooperation between Germany and Israel in the humanities and social**

On February 5, 2010, during her visit to Israel, the Federal Minister of Education and Research, Annette Schavan, has announced the creation of an endowment for the Foundation Martin Buber [1] to the benefit of young German and Israeli researchers in the field of humanities and social sciences. Through this fund, the Federal Ministry of Education and Research (BMBF) offers 20 million Euros to the Foundation Martin Huber.

The support of BMBF should, each year, funding research of ten young researchers - five German and five Israelis - who have the opportunity to conduct their work on the campus of the Hebrew University of Jerusalem [2]. *"The cooperation between Israel and Germany as well as exchange of researchers is a priority for both our countries. With the endowment of the Martin Buber Foundation, we support now working in Israel for young researchers in the humanities and social"* said Schavan during her visit to



Jerusalem. It should be noted that cooperation between Germany and Israel until now was almost exclusively in the field of exact sciences.

Schavan stressed the importance of the social dimension of this new fund: *"Our world is changing. The humanities can help us understand and influence changes that are occurring now. Today, conflicts between cultures, religions and states are a central theme for the Humanities."*

The primary beneficiaries of the BMBF funding will be selected in a few weeks. They will soon begin their research in September 2010 on the campus of the Hebrew University of Jerusalem. Young scientists should hold a PhD and willing to pursue an academic career. The next call for application is planned for the end of 2010.

*Sources: February 2010*

*Electronic Bulletin, February 11, 2010*

- [1] Web site for the Martin Buber Company (German): <http://www.buber-gesellschaft.de/>

- [2] Web site for the Hebrew University of Jerusalem (English and Hebrew):

[http://www.huji.ac.il/huji/eng/index\\_e.htm](http://www.huji.ac.il/huji/eng/index_e.htm)

### **10.11 The German Agency for Research (DFG) Establishes 10 New Research Groups**

The German Agency for Research (Deutsche Forschungsgemeinschaft - DFG) is strengthening support for research groups ("Forschergruppe"), which differ in terms of duration, theme, and funding level from other programs such as the priority research programs (Schwerpunktprogramm - SPP) or the individual support (Einzelforderung). The purpose is to provide medium-term (usually six years) financial and material resources for close collaboration between leading researchers. A total of 10 new research groups will be supported up to 22.2 million allocated over a period of 3 years, including five in cooperation with foreign research teams. The DFG currently supports 209 research groups.

Among the newly selected projects, three are within the framework of cooperation between the DFG and the Japan Science and Technology Agency (JST). The three groups of researchers selected among 19 projects from Germany and Japan are in physics, chemistry, and engineering. Researchers at Mainz, Kaiserslautern (Rheinland-Pfalz) and Sendai (Japan) are working on research in spintronics [1] under the project entitled "Materials for Spintronics and Advanced Transport Phenomena". The research group in quantum computing in diamond synthesis ("Quantum Computing in Isotopically Engineered Diamond") aims to develop new storage media format for quantum information. To this end, researchers in Regensburg (Bavaria), Tokyo and Sendai rely on the still underexploited quantum properties of the diamond and the collaboration of another research group in electronic topology (Topological Electronics) Würzburg (Bavaria).

Also as part of international cooperation, the project "Ecosystems of Kilimanjaro Under the Influence of Climate Change" examines the changes in ecosystems at Kilimanjaro (Tanzania) in response to changing climatic conditions and soil use. Universities in Germany (Bayreuth) and Switzerland (Bern) are involved in this project. The Swiss side is supported by the Swiss National Fund.

German and Mexican researchers will collaborate on "Determinants of Polarized Growth and Development in Filamentous Fungi" to identify the molecular basis of cell polarity and the basic mechanisms of growth of multicellular organisms. The German partners (Karlsruhe Institute of Technology KIT) and those in Mexico (Center of Scientific Research and Education of Ensenada / Mexico) are supported by the DFG and its Mexican partner, the National Council for Science and Technology (CONACYT).

In the life sciences, four other research groups in Germany will receive funding. A project on the "sequence of cultures and assimilation of nutrients through the soil resource", at the University of Bonn, is studying the acquisition by plants of nutrients using physical and physiological biological methods. The research group "iBeetle: functional genomics of embryogenesis and metamorphosis of insects", at the University of Göttingen will study the genome of the red flour beetle (meal worm). The research group "photonic switches based on proteins used as tools opto-genetics" will study mechanisms of ion channels



and enzymes when subjected to a light stimulus. This study should help to develop new tools in cell biology and neuroscience. The project "sulfated steroids in reproduction" looks at the effect of steroids on cardiovascular activation. Researchers will determine their impact in the mechanisms of reproduction.

Finally, in the field of nanoscience, "Controlling the electronic structure of semiconductor particles by doping [2] and hybrid training" conducted at the Technical University of Berlin aims to change the electronic and optical properties of carbon and silicon molecules. This work should help to better characterize these nanostructures.

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[1] Science, which uses the spin properties of electrons to store and transport information, and allows for example to increase the efficiency of disk drives.

[2] The doping is to introduce impurities in small quantities in a pure substance to alter its conductivity properties.

*Sources: February 2010*

*- Electronic Bulletin, February 18, 2010*

*- Listing of researchers supported by the DFG:*

*<http://www.dfg.de/foerderung/programme/listen/index.jsp?id=FOR>*

*- News release from DFG: DFG richtet zehn weitere Forschergruppen ein" – February 11, 2010 -*

*[http://www.dfg.de/en/service/press/press\\_releases/2010/pressemitteilung\\_nr\\_06/index.html](http://www.dfg.de/en/service/press/press_releases/2010/pressemitteilung_nr_06/index.html)*

## **10.12 Strengthening Transatlantic Cooperation Germany - USA**

On Tuesday, February 18, 2010, the Federal Minister of Education and Research, Annette Schavan, and U.S. Secretary of State Assistant James B. Steinberg, signed a new scientific partnership agreement between the two countries. The key themes for cooperation between researchers are energy, climate, environment, and health.

The bilateral working groups have begun their research programs. They must develop innovative solutions on standards and norms, in partnership with economic actors to strengthen their position in the U.S. market, German, and American companies. She took advantage of this trip to inaugurate the German House Center for Research (DWIH) in New York on Wednesday, February 19. Agreements already exist between the two countries (research agreement on Civil Security in March 2009 [1]) and between the Federal Ministry of Education and Research and American institutions as the California Institute for Regenerative Medicine (CIRM).

During the Minister's trip to California during the summer of 2008, which involved the Center for Regenerative Therapies in Berlin Brandenburg (BCRT), the German - California RegMed initiative have been established at the CIRM. The new agreement will extend the list of partner institutes. In Germany, the Research Center for Regenerative Therapies, Dresden (CRT), the Max-Planck Institute for Molecular Biomedicine in Münster, the therapy center cardiac stem cells in Rostock, and the Max-Planck Heart and Lung Research Institute in Bad Nauheim will also participate in bilateral research.

The German Innovation and Research Houses [2] includes major players in German science -- the German Agency for Research (DFG), the German Academic Exchange Service (DAAD), the Max Planck Society (MPG), the Leibniz Institutes (WGL), the Alexander von Humboldt Foundation (AvH), the Helmholtz Society (HGF), the Fraunhofer Society (FhG), the Conference of University Presidents (HRK), the Academy German Natural Sciences Leopoldina, and the Chamber of Commerce and Industry (DIHK). Currently 5 German Innovation and Research Houses have been inaugurated: Tokyo, New York, Moscow, New Delhi and Sao Paulo. They result from an initiative of the Ministry of Foreign Affairs (AA) which has partnered with the Federal Ministry of Education and Research (BMBF) as part of the "2009 International Strategy" [3].

The total budget amounts to 43 million Euros, fully supported by the AA, which provides a package of three million Euros in the first year for the launch of DWIH. The first was established in March 2009 in Sao Paulo, followed in the same year by those in Moscow, New Delhi, Tokyo and New York.

For two or three years, each center is managed by a consortium from an organization or a group of several partners, after which each center will be self-managed. They represent a tremendous opportunity for international visibility of German research and help coordinate the efforts of all actors.

*Sources: February 2010*

- *Electronic Bulletin, February 24, 2010*

- [1] *Signature of the agreement between the American and German governments - <http://www.bulletins-electroniques.com/actualites/58257.htm>*

- [2] *Internet page of the Auswärtigesamt on the German Houses for Science and Innovation:*

<http://redirectix.bulletins-electroniques.com/Fhwuy>

- [3] *Internet page of the Auswärtigesamt on initiative: <http://redirectix.bulletins-electroniques.com/1zf4v>*

- *"Schavan: Neue Qualität der Zusammenarbeit erreicht", BMBF press release- February 18, 2010 - <http://www.bmbf.de/press/2787.php>*

- *"BCRT Forscher begleiten Schavan auf USA Reise", Biotop press release – February 22, 2010 - <http://redirectix.bulletins-electroniques.com/zClt5>*

- *"Schavan: Deutsche Forschung weltweit sichtbar machen", BMBF press release- February 19, 2010 - <http://www.bmbf.de/press/2788.php>*

### **10.13 The Alexander von Humboldt Foundation to Coordinate Mobility Program (Germany)**

Under the 7th Framework Program for Research and Development (FP7) of the European Union, a search has been undertaken to select the coordinator of the EURAXESS initiative [1]. This service consists of a network of approximately 200 centers in 35 European countries which will provide assistance to researchers and their families to facilitate mobility within the European Research Area (ERA), either in professional life or in everyday life (visas, work permits, language, schooling, health insurance, etc.).

The project, whose exact title is: "EURAXESS TOP - Enhancing the Outreach and Effectiveness of the EURAXESS Network Partners - has an 18 month budget of 2.9 million Euros. The objective of this project is to share models that have proven effective throughout Europe and collect them in a guide which will be published and made available to partners. In a second step, it is planned to modernize and optimize the websites of the EURAXESS countries. Finally, teams from each center will benefit from joint training to improve their skills and promote exchanges among them.

The EURAXESS center for Germany [2] is located since 2003 in the Alexander von Humboldt Foundation (AvH) and is supported by the Federal Ministry of Education and Research (BMBF).

*Sources: March 2010*

- *Electronic Bulletin, March 10, 2010*

- [1] *Brochures of EURAXESS program (French): [http://ec.europa.eu/euraxess/pdf/brochure\\_highsol\\_fr.pdf](http://ec.europa.eu/euraxess/pdf/brochure_highsol_fr.pdf)*

- *Web site of EURAXESS: [http://ec.europa.eu/euraxess/index\\_en.cfm](http://ec.europa.eu/euraxess/index_en.cfm)*

- [2] *Web site of EURAXESS Germany (English): [http://www.euraxess.de/portal/funding\\_programmes.html](http://www.euraxess.de/portal/funding_programmes.html)*

### **10.14 Increased budget for education and research in 2010 (Germany)**

During Chancellor Angela Merkel's presentation of the 2010 budget before the German parliament, she reported an increase in spending of 6.5% for the year 2010. The CDU-CSU coalition supports an active policy for research, innovation and higher education.

Upon publication of the coalition contract in late 2009, it stated its desire for an increase in the budget of the Federal Ministry of Education and Research of €12 billion by the end of the legislative term or mid 2013. This accounts for the increase in the budget this year from 10.87 billion Euros (660 million).

The framework program , "Research for Sustainable Development", which is part of the High-Tech Strategy, replaces the "climate, environment and sustainable management" project . Besides a name change, the new program has a 10% increase in its budget, to 137 million for the year 2010. In addition, 144 million will be spent on environmental technologies and sustainable (+12% compared to 2009). New

technologies see their funding increased by 14% to € 709 million. The life sciences in particular will see their funding increased by € 500 million. Education is not left behind as large sums are being spent on all aspects of training and education. An increase of 71% in the budget ( € 193 million total) is devoted to improving "modernization and strengthening of vocational training" activities. The budget for "improving lifelong learning" increased 44% to € 201 million. The funds for higher education are also increasing, including the high school agreement (Hochschulpakt) with an increase of one third of its budget, amounting to € 509 million.

Two initiatives promote the internationalization of German research and higher education: the Alexander von Humboldt professorships, which received € 39 million in additional resources and a program to support cooperation with countries in the developing World will receive € 13 million.

*Sources: March 2010*

- *Electronic Bulletin, March 24, 2010*

- *Press release BMBF, March 18, 2010 - <http://www.bmbf.de/press/2818.php>*

- *Tagesspiegel's article, March 19, 2010 - <http://www.tagesspiegel.de/magazin/wissen/art304,3060522>*

### **10.15 Business Investments in German Universities to be Assessed**

The German institutions of higher education are increasingly resorting to external financing. The Federation of German Scholarship Donors (Stifterverband) and the Institute of German Economy in Cologne (IW Köln) are currently conducting the first analysis on the source of their funding. Between 1998 and 2006, funding from the federal government increased by 17%, while other public funding (federal states) was up 51% and private funding increased by 61%

German companies contribute significantly to the financing of equipment, fellowships, and professorships. In order to accurately measure the share of private investment, a cross-section of 10,000 German companies with more 50 employees are being interviewed. The results and analysis report will be made public on November 18, 2010 during the Villa Hügel dialogues [1].

Three points will be addressed:

- Grants to institutions (allowance, gifts in kind, loans and chairmanships);
- Investments in companies for collaboration (alternating courses, internships, memoires, collaborations in education and participation on the boards of directors);
- Grants to students (scholarships and loans, alternating pay for trainees and students, scholarships for employees).

The ultimate goal is to measure the involvement of enterprises in the German Higher Education system.

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*[1] The Dialogues of the Villa Hügel meet once every two years and gather thirty personalities in science, economics and politics to discuss on one political scientific question.*

*Sources: April 2010*

*Electronic Bulletin, April 29, 2010*

*Stifterverband press release – April 21, 2010, <http://redirectix.bulletins-electroniques.com/wGzZq>*

### **10.16 Helmholtz Association Opens New Doctoral Schools (Germany)**

Two new graduate schools and four colleges (fellows) will soon be established by the Helmholtz Association. Thanks to the influx of support and networking of the Helmholtz Association, the new structures will receive annual grants of up to € 500,000. In total, the Helmholtz funds eight graduate schools and eleven colleges. Colleges focus on a specific research program in small teams with a maximum of 25 doctoral students. Graduate schools are open to all areas of doctoral research centers and offer interdisciplinary courses.

The new centers for doctoral students were selected by a committee of experts. Professor Jürgen Mlynek, president of the Helmholtz Association, says the graduate schools and colleges will provide a global

framework and opportunities for further training in order to offer doctoral students the best conditions for a successful thesis in preparing their career.

The Helmholtz Centre for Health and Environment in Munich (HMGU) will be able to establish a new Helmholtz college and graduate school. The Helmholtz Graduate School of Environmental Health (HELENA) will offer training to 400 PhD students on diseases related to environmental factors and lifestyle, in partnership with the Ludwig Maximilian University (LMU) and the Technical University of Munich (TUM). It will have an annual budget of € 500,000. The Helmholtz "Biology and Lung Diseases" college will receive € 250,000 per year and involve the LMU Munich University Clinic and other partners.

The Karlsruhe Institute of Technology (KIT) will also establish a new Helmholtz graduate school and college. The "KIT - Graduate School for Climate and Environment (GRACE-KIT) will be implemented in collaboration with the Technical University of Darmstadt and will receive € 450,000 per year. The Helmholtz college "Energy-related Catalysis" will receive € 300,000 per year to allow 20 students to conduct research on catalytic processes for energy processing and storage, with the participation of the University of Heidelberg.

The German Center for Aerospace Research (DLR) in partnership with the Technical University of Berlin (TUB) will receive annual support of € 300,000 to establish the Helmholtz college on the theme of "Security Technology".

The Center for Research in Geosciences (GFZ) in Potsdam will cooperate with the University of Potsdam and the Free University of Berlin (FU) in the future Helmholtz college "Geosim" which will develop simulation tools on the dynamics of earthquakes and on mechanisms of change.

*Sources: April 2010*

*Electronic Bulletin, April 29, 2010*

*Helmholtz Society Press Release April 22, 2010: <http://redirectix.bulletins-electroniques.com/FXlbS>*

#### **10.17 ViaMeca and INPLAS Clusters Agree to Cooperate (Germany)**

As part of the Hanover Fair, the French competitiveness clusters ViaMeca and German INPLAS have signed a cooperation agreement to strengthen their partnership activities. The agreement was reached on the initiative of the Federal Ministry of Economics and Technology (BMWi) and the network of clusters in Germany (Deutschland Kompetenznetze) committing both partners to a close scientific cooperation, through conferences, student exchanges, support for international industrial projects, improving communication between partners, and joint public events. The agreement focuses on the activities of the two centers in the field of surface engineering (especially with plasma technology), and engineering in general.

ViaMeca is a cluster specializing in the field of mechanics and is located in the French Massif Central. One hundred fifty companies, research institutes and academic institutions, and players in the fields of mechanical and automotive engineering are members. The center specializes in the techniques of forming, robotics, and surface engineering, and comprises approximately 20% of French assets in mechanics. INPLAS is a German center regrouping the principal actors involved in surface technologies (screen televisions, DVD, Blu-Ray, etc.), and is composed of 70% of industries and 30% of research institutes.

An agreement had already been signed in the past between these two centers. INPLAS had been given financial assistance of some € 30,000 in 2009, as part of a bilateral cooperation program supported by the Federal Ministry of Education and Research (BMBF). This funding was primarily dedicated to travel and arranging meetings with a foreign partner center (in this case ViaMeca).

*Sources: April 2010*

*Electronic Bulletin, April 29, 2010*

*Kompetenznetze Deutschland Press Release, April 21, 2010, <http://redirectix.bulletins-electroniques.com/OOHiv>*

### 10.18 German Proposals for 8th Framework Program

The German Minister of Education and Research, Annette Schavan, submitted a proposed structure for the future 8th Framework Program for Research and Development (PCRD) on Wednesday, April 14, 2010 to the new Commissioner for Science, Research and Innovation, Máire Geoghegan-Quinn. The German Minister notes that *"this program is extremely important for the science and society. It must provide the structure and necessary content to make the European research a success story at the international level"*.

The 8th PCRD should draw even more strongly than previously a starting point for research and innovation. Germany presents its High-Tech Strategy as a starting point for future discussion. The German Minister highlights the scientific and technological excellence, but also the positioning of the European Research Council (ERC) at the world forefront in pioneering research. It is necessary to simplify and speed up the process of filing and submitting applications in order to make the program more attractive to European players in research. More specifically the award of transnational cooperation project should become a focus point.

The European Commission must present a first overview of the program during the fall of 2010; the 8th PCRD is to begin late 2013.

*Sources: April 2010*

*Electronic Bulletin, April 21, 2010*

*BMBF press release- April 14, 2010, <http://www.bmbf.de/press/2831.php>*

### 10.19 Vision for Technical University of Berlin (Germany)

Jörg Steinbach took advantage of his official nomination as head of the Technical University of Berlin (TUB) to set out his vision for the future of the institution. The DFG classification for 2005-2007, which places the TUB in 27th place nationally, (against 16th place for the period 1996 to 1998) does not reflect reality, says Steinbach.

Indeed, the ending of Kurt Kutzler's mandate saw many changes. Funding from the DFG has more than doubled between 2006 and 2009, from €78 to €125.5 million. However the number of professors declined from 514 to 275 across 10 years, with only 90% of those being replaced. The TUB hopes that its cooperation with major research institutions such as the Fraunhofer Society (FHG) will take it in a new direction.

Mr. Steinbach was keen to highlight the success of the Center of Excellence in Chemistry and its participation in the two Communities of Knowledge and Innovation (CCI) on climate and information technology and communication established by the European Institute of Technology (EIT). In addition, the TUB plans to establish four new clusters and two new graduate schools under the next round of the excellence initiative.

In this context, the new president of TUB strongly supports close cooperation with the two other major universities of Berlin: the Free University of Berlin (FU) and the Humboldt University (HU). The three institutions already cooperate in several areas, and the FU has offered to TUB the use of their representative offices in New York and Beijing. In exchange TUB has opened its business contact list to FU and HU.

*Sources: April 2010*

*- Electronic Bulletin, April 21, 2010*

*- "Auf Augenhöhe mit den Grossen", Tagesspiegel – April 15, 2010*

*- "Technische Universität startet Aufholjagd", die Welt – April 15, 2010*

*- "Mit dem "Team-Bazillus" nach oben", Berliner Zeitung – April 15, 2010*

### 10.20 DFG to Fund the Research Centre "Matheon" for Another Four Years (Germany)

Berlin institution again successful in the second intermediate evaluation



The DFG Research Centre "Matheon: Mathematics for key technologies" in Berlin will receive funding from the Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) for another four-year period. The decision to award approximately €27 million to the centre was made by the Joint Committee of the DFG on 30 April 2010. The research centre, established in 2002, was again convincing in its second project-renewal review with its scientific accomplishments and attractive environment for mathematicians. Furthermore, with its extensive school and public relations work, Matheon helps to shape mathematics as a modern and exciting scientific discipline. The DFG Research Centre is jointly operated by the three Berlin universities, the Konrad Zuse Institute for Information Technology and the Weierstrass Institute for Applied Analysis and Stochastics (Weierstraß-Institut für Angewandte Analysis und Stochastik, WIAS), which support the centre with great dedication and clear perspectives. Matheon unites more than 50 working groups under its roof.

The researchers at Matheon consider mathematics to be the common thread of success in all application areas that rely on abstraction and flexibility. In times of increasingly complex technologies and ever-shorter innovation cycles, they employ mathematical methods as a decisive key for success. By means of efficient algorithms, optimum solutions and, not least of all, solid theoretical knowledge, mathematics contributes to value creation.

Against this backdrop, Matheon unites numerous mathematical disciplines and, in a total of seven fields of application, examines practically oriented questions from a wide range of areas: from the life sciences to production processes to finance. The researchers apply their knowledge and methods, for example, to the identification of active agents in medications; crystal growth, which is relevant for coatings of all types; the optimization of subway schedules; improved mobile phone networks; and improvements in the efficiency of the Hamburg container port. During the course of many projects, they cooperate with industry, business and the public sector. Matheon represents a true model of success and demonstrates the benefits that are possible with the interaction of basic research and practical applications. Time and again, real-world problems lead to challenging tasks for theory, from which new mathematical methods arise.

Schools and the general public are important target groups for Matheon. With periodic presentations for school classes and continuing-education programs for teachers, the centre contributes to the modern image of mathematics at schools. Every December, the Matheon advent calendar regularly invites students and adults to solve puzzles on the Internet with great success. Video diaries on [www.dfg-science-tv.de](http://www.dfg-science-tv.de) explain the work of the mathematicians. In addition, the research centre informs the public at a number of events and co-operations and shows that math is fun!

Matheon is one of six DFG Research Centers. The centers "The Ocean in the Earth System" in Bremen, "Functional Nanostructures" in Karlsruhe, and "Experimental Biomedicine" in Würzburg were established in 2001 and, after two very successful funding periods, were approved for a third funding period in April, until the middle of 2013. In addition to Matheon, the centre "Molecular Physiology of the Brain" in Göttingen was also established in 2002 and will undergo its second project renewal review in 2010. The DFG Research Centre "Regenerative Therapies" in Dresden (CRTD) was established in 2006 and was approved for another four years of funding following the intermediate evaluation in 2009.

Introduced as a brand-new and particularly strategic funding instrument, the research centers, with their bundled scientific competence and cooperation between universities and non-university research institutions, have - not least of all - become a model for the excellence clusters in the Excellence Initiative. As a result, a total of four of the research centers are, following appropriate supplementary proposals, now also funded as clusters of excellence.

*Sources: May 2010*

*DFG Press Release #20. April 30, 2010*

<http://www.matheon.de/>

*Further information on the DFG Research Centres can be found at:*

[http://www.dfg.de/en/research\\_funding/programmes/coordinated\\_programmes/research\\_centres/index.html](http://www.dfg.de/en/research_funding/programmes/coordinated_programmes/research_centres/index.html)



### **10.21 German Research Foundation Adds 9 New Units**

Topics Range from "Cloud Computing" to Glass Dynamics

Sources: May 2010

Full article available at:

[http://www.dfg.de/en/service/press/press\\_releases/2010/pressemitteilung\\_nr\\_21/index.html](http://www.dfg.de/en/service/press/press_releases/2010/pressemitteilung_nr_21/index.html)

### **10.22 DFG Establishes New Priority Programs (Germany)**

Topics Range from International Financial Markets to Self-healing Materials to the Interstellar Medium / Networked Basic Research and High Application

Sources: May 2010

Full article available at:

[http://www.dfg.de/en/service/press/press\\_releases/2010/pressemitteilung\\_nr\\_22/index.html](http://www.dfg.de/en/service/press/press_releases/2010/pressemitteilung_nr_22/index.html)

### **10.23 Bill & Melinda Gates Foundation Supports Helmholtz Research Center (Germany)**

As part of the "Grand Challenges Explorations" program from the Bill & Melinda Gates Foundation, the Helmholtz Research Center in Infectious Diseases (HZI) of Braunschweig (Lower Saxony) has been selected to pursue its project called POLMITRANSVAC (Pollen Mimetic Transcutaneous Immunization). This project is part of 78 research projects selected from over 2,700 applications received from 18 countries across six continents.

The HZI project, in partnership with the Helmholtz Institute of Pharmaceutical Research (HIPS), is located in Saarbrücken. It will receive up to a million dollars from the Gates Foundation. Carlos Alberto Guzmán (HZI), Claus-Michael Lehr and Steffi Hansen (HIPS) and Ulrich Schäfer (University of Saarland) want to combine knowledge of HZI vaccine with HIPS expertise at the University of Saarland in formulating active ingredients contained in nanoparticles. The novelty comes from the way the vaccine is injected into the body: the nanoparticles penetrate the skin through hair follicles and release the vaccine in contact with sweat, as in the case of pollen sensitization. This method of vaccination prevents painful needle injection and could stimulate the mucosal immune response.

Sources: May 2010

Electronic Bulletin, May 20, 2010

Press release of the Helmholtz Research Center - "Helmholtz-Zentrum für Infektionsforschung erhält Projektförderung der Bill und Melinda Gates Stiftung" – May 14, 2010 - <http://redirectix.bulletins-electroniques.com/XGpqN>

### **10.24 Foresight Technique Provides German View of Future**

In order to determine future trends, the Federal Ministry for Education and Research (BMBF) has brought together researchers on the "Method of Forecasting" (Foresight Prozess) project launched in September 2007. This foresight technology approach has explored scientific questions divided into seven thematic areas.

This tool should be used by the government to improve its strategy and identify policy errors as soon as possible, particularly in the context of the High-Tech Strategy.

Sources: May 2010

Electronic Bulletin, May 20, 2010

<http://www.bmbf-foresight.de/>

BMBF press release - "Ministerin Schavan: "Wir wollen das Gras wachsen hören"" – May 14, 2010 -

<http://www.bmbf.de/press/2847.php>

### **10.25 Encouraging Results From Bologna Process Conference (Germany)**

The Bologna Process, which harmonizes the European University Education System by introducing the bachelor-master-doctorate (License-Master PhD, LMD), has been heavily criticized in Germany. German

students went on strike in many universities during the 2009-2010 winter semester. Faced with the students' anger, the Federal Minister of Education and Research, Annette Schavan, announced a summit in the first half of 2010.

As part of this summit, the Minister met Monday, May 17 in Berlin with various representatives of the Länder, universities, businesses, trade unions and student representatives. This was an opportunity for all stakeholders to discuss the changes taking place under the Bologna Process. Student mobility, the quality of teaching, and the acceptance of the Bachelor degree level (i.e. the level of License, a Baccalaureate plus three years – Bac+3) on the labor market were the main points discussed.

In addition to planning to hold such meeting annually, the government decided to institute a "Pact of Quality" by providing an additional budget of 2 billion Euros over the next 10 years to improve teaching conditions. This amount will, for example, allow the hiring of new staff, set up tutoring and coaching programs, or provide additional training for management personnel.

Moreover, the Federal Ministry for Education and Research (BMBF) will increase the mobility aid of about 90 million Euros until 2015. This increase will enhance new university cooperation, establish a four year bachelor's degree, including an exchange year abroad and additional language classes.

*Sources: May 2010*

*Electronic Bulletin, May 20, 2010*

*Communiqué du BMBF - "Ministerin Schavan: "Starkes Signal für bessere Lehre"" - 17/05/2010 - <http://www.bmbf.de/press/2858.php>*

#### **10.26 Federal Research and Innovation Report Released in Germany**

Every two years, the Federal Ministry for Education and Research (BMBF) publishes a report on the status of research and innovation in Germany (*für Forschung und Innovation Bundesbericht BuFi*). The 640 page 2010 edition was released on May 19 by the Federal Minister of Higher Education and Research, Annette Schavan.

Minister Schavan emphasized that "the report shows how investments in R&D pay off." She continued by saying that "the share of goods and services deriving directly from research in Germany is 45%." The Minister also added that the number of publications and patents increased by 20% since 2000.

At the same time, the Federal Government has continuously increased the R&D budget. Between 2005 and 2008 investment in R&D increased by 21%, representing 1.9 billion Euros. Likewise, the economic actors, despite the crisis, increased their investment by 19%, to 7.4 billion Euros.

These figures confirm the orientation of the German government. According to the Minister, the changes in the financial markets confirm that the maneuver adopted by Berlin has succeeded in making Germany a science country. According to BMBF calculations, investment in R&D in 2008 represents 2.64% of the German GDP. Schavan also reiterated the announcement made by the coalition government that will result in an additional 12 billion Euros for education and research in the current legislative period.

*Sources: June 2010*

*Electronic Bulletin, May 27, 2010*

*Schavan: "Zukunftsinvestitionen - jetzt erst recht!" - 19/05/2010 - <http://www.bmbf.de/press/2860.php>*

#### **10.27 Germany Approaches 10% of GDP for Education and Research**

In 2008 the Federal and Lander governments, along with the German private sector, invested a total of 215.3 billion Euros in education and research. This joint effort represents an increase of 11.2 billion Euros compared to 2007 and represents about 8.6% of GDP. Germany is moving closer to the target set two years ago of 10% of GDP devoted to education and research in 2015. The Federal Minister for Education and Research, Annette Schavan, will meet the Minister-Presidents of the Länder to decide how to reach this goal.

At the Summit on Education last December [1], the Federal Government committed to fund 40% of the additional costs (13 billion Euros until 2015). Among the projects that will be funded, are:

- A new scholarship program for students in higher education;
- The "Pact of Quality" [2] for education as the third pillar of the Pact for Higher Education (Hochschulpakt);
- A package for transitions in training;
- The establishment of an alliance for the training of children from disadvantaged backgrounds.

*Sources: June 2010*

- *Electronic Bulletin, June 2, 2010*

- [1] "Report of the Education Summit: an additional 13 billions" - BE Germany 465 – Jan 06, 2010 - <http://www.bulletins-electroniques.com/actualites/61777.htm>

- [2] Encouraging results following the National Conference on the Bologna Process» - BE Germany 483 – May 20, 2010 - <http://www.bulletins-electroniques.com/actualites/63393.htm>

### **10.28 Two New Technology Centers in Würzburg (Germany)**

The EU has supported the construction of two new technology centers in Würzburg (Bavaria) [1] in the fields of nanotechnology and ultra-high definition analysis. The funding comes from the European Fund for Regional Development (FEDER) and is part of the "Regional competitiveness and employment in Bavaria 2007-2013".

The grants will help build a center for nanotechnology companies and a center for applied ultra-high definition analysis at the University of Würzburg. Research projects have been selected by the Minister of Science, Research and Art and the Minister of Economic Affairs, Infrastructure, Transport and Tourism of Bavaria. Both centers focus on improving cooperation and knowledge transfer between the University of Würzburg and the businesses in Northern Bavaria. The University is particularly interested in outreach to SMEs who lack the necessary equipment or personnel to innovate.

The Center for Innovative Nanotechnology aims to develop components for nanoscale sensors in the fields of health or energy. The center should also strengthen research on organic and inorganic semiconductors.

New measurement devices will be operational in the future center for analyzing ultra-high resolution with applications in computing, automotive, nature, life sciences, and medicine. A new mass spectrometer will specifically examine with great precision components of material layers and their distribution.

*Sources: June 2010*

- *Electronic Bulletin, June 2, 2010*

- [1] Web Site of the University of Würzburg: <http://www.uni-wuerzburg.de/>

### **10.29 German American Student Exchange**

With a one-year stay in the United States that includes of a combination of university seminars and training courses, the InWEnt program (Internationale Weiterbildung und Entwicklung gGmbH) allows 75 talented youth a chance to get a sense of the "American Way of Life" on site. As young ambassadors, they contribute to a better understanding between the two countries.

The purpose of the exchange, set up by the parliaments of both countries, is to provide a better understanding of the historical, societal, and economic conditions in each country. This is intended to deepen relationship between Germany and the US. Members of the Bundestag and the U.S. Congress act as sponsors for the duration of stay. The cost of the university program, accommodation in a host family, travel and insurance are supported by the two parliaments.

Applications are to be submitted in September 2010, for travel in August 2011. They are reserved for young people born after July 31st, 1986, speaking English and having completed training.

*Sources: June 2010*

- *Electronic Bulletin, June 2, 2010*

### **10.30 German Federal Government plans to increase its expenditure on education and research by 9 percent**

In its draft budget for 2010, the Federal Government plans to increase its expenditure on education and research by 9 percent. The BMBF's budget will thus rise to over 10.9 billion Euros.

Investing in the future of education and research is a top priority - in times of economic crisis, we need investments more than ever before. They can help us to overcome the crisis and emerge from it stronger and with new ideas. The Federal Government is making an important contribution to this. With a total volume of €10.9 billion, the BMBF's budget for 2010 will increase by about €660 - or more than 6 per cent - compared with 2009. Education and research have thus become firmly established in the federal budget, despite the difficult financial situation.

Sources: June 2010

Full article available at:

<http://www.bmbf.de/en/96.php>

### **10.31 The German Technical Universities are getting active on the international level**

The nine largest German universities, grouped within the TU9 alliance [1], went to the NAFSA conference (Association of International Educators) in Kansas City (May 30 to June 4, 2010). This year's conference was attended by nearly 7,000 delegations from a hundred countries around the theme "The Changing Landscape of Global Higher Education."

The annual conference had the following objectives:

- Develop new contacts with the academic world and use its presence to interact with partners worldwide;
- Participate to 264 workshops and conferences that will establish during three days an evaluation of the international educational market dealing with very real issues (visas, immigration, workshop-country credentials ...) or with animated discussions by prominent personalities;
- Embed this event which is the back bone of a "global academic governance.

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*[1] TU9 is an alliance informally created in 2003 by the President of Technical Universities. On June 26, 2006, the TU9 association was officially founded. It includes the following institutions: the Rhine Westphalia Technical University (RWTH) in Aachen, the Technical Universities of Berlin, Brunswick (Lower Saxony), Dresden (Saxony), Darmstadt (Hesse) and Munich (Bavaria), the Karlsruhe Institute of Technology (Baden-Württemberg), the University of Stuttgart (Baden-Württemberg) and the Leibniz University of Hannover (Lower Saxony). The aim is to promote research, engineering and natural sciences. The alliance groups nearly 200,000 students, representing 12% of students enrolled in higher education.*

Sources: June 2010

Electronic Bulletin, June 10, 2010

TU9-Universitäten auf der 62. NAFSA Konferenz in Kansas City (USA), Kooperation international article, 01/06/2010 - <http://redirectix.bulletins-electroniques.com/UFVeZ>

### **10.32 The German Agency for Research (DFG) Establishes New Graduate Schools**

In order to strengthen support for young talent, the German Agency for Research (DFG) will establish twelve new graduate schools (GRK). These schools allow doctoral students to develop in research structure at the highest qualification level. Among the new graduate schools, three have international partnerships with Indian and French universities. Of the twelve new institutions, two are establishing an innovative "Fast Track" model (one in life science in Erlangen-Nuremberg and another in economics in Bonn).

This innovative model allows students graduating (BA) with outstanding records to advance more rapidly toward their thesis. In addition, doctoral candidates may be awarded national and internationally competitive scholarship. In the interest of gender equity, additional funding will be granted to graduate schools in fields such as social sciences and life sciences, where a large number of doctoral students are conducting research.

The new structures will receive 45 million Euros in total for four and a half years. At the meeting of the Evaluation Committee, 19 graduate schools had their contracts extended, bringing the total number of doctoral programs supported by the DFG to 219, including 55 international schools.

*Sources: June 2010*

*Electronic Bulletin, June 10, 2010*

*DFG richtet zwölf weiteren Graduiertenskollegs ein, Kooperation-international article, 03/06/2010 - <http://redirectix.bulletins-electroniques.com/GO1in>*

### **10.33 The Alexander von Humboldt Foundation Connects with Mexico (Germany)**

The Alexander von Humboldt Foundation (AvH) and the National Council for Science and Technology of Mexico (CONACYT) in Mexico have decided to strengthen their cooperation. Starting in 2011, a Mexican prize based on the Humboldt Research Award model will be granted to German scientists. With this award, scientists will have the opportunity to stay in Mexico for a maximum of one year. Moreover CONACYT wants to support future conferences organized by the Alumni Association Humboldt (Humboldt-Alumni) in Mexico.

These discussions took place as part of a symposium organized by the AvH in Mexico City on June 4 to 6 in the presence of the President of the AvH, Helmut Schwarz and the Vice President and recipient of a Research Humboldt award, José Antonio de la Peña. More than 110 Humboldt alumni from Mexico and neighboring countries were present, as well as "alumni" of the German Academic Exchange Service (DAAD). The Delegation of German scientists outlined to their Mexican counterparts the current research landscape in Germany during meetings and visits to various research institutions.

In addition to addressing topics of scientific cooperation, the conference scientists with an opportunity to discuss the broadcast networks, knowledge creation, and role of cultural identity in this process. Climate change, renewable energy, sustainable resources and food security were the focus of the discussions.

*Sources: June 2010*

*Electronic Bulletin, June 17, 2010*

### **10.34 Two Max Planck Centers Planned in South Korea (Germany)**

Professor Peter Gruss, President of the Max Planck Society (MPG) and Professor Baik Sunggi, President of the University of Science and Technology, Pohang (Postech) [1] signed a Memorandum of Understanding on June 14, as part of the "Korean Research Initiative" which will initiate the construction of two Max Planck Research (MPC) Centers.

The centers -- "Attosecond Science" and "Complex Phase Materials" -- will strengthen the existing cooperation between researchers from the MPG and South Korean counterparts. Both MPC focus on key future oriented themes and will encourage exchange of know-how and personnel.

In addition to bringing together researchers from Germany and South Korea, the "Attosecond Science" MPC will include scientists from Australia, China, and Japan. On the German side researchers will include Ferenc Krausz of the Max Planck Institute for Quantum Optics, Joachim Ullrich of the Max Planck Institute for Nuclear Physics, Andrea Cavalleri of the working group on structural dynamics CFEL [2], Jan Rost of the Max Planck Institute of Complex Physical Systems, and Martin Wolf of the Fritz Haber Institute.

The "Complex Phase Materials" MPC is headed by Liu Hao tjeng of the Max Planck Institute for Chemical and Solid State Physics and Joae-Hoon Park and Sang-Wook Cheong of Postech. The central theme concerns the synthesis and study of new materials and elucidating phenomena of their quantum atomic constituents.

The initiator of this project is Prof. Peter Fulde, Director Emeritus of the Max Planck Institute for Complex Physical Systems in Dresden (Saxony). In 2007 he was granted a professorship at Postech and named director of the Asia-Pacific Center for Theoretical Physics located on the Postech campus. This gave him

the opportunity to establish groups of young researchers financially supported by the MPG.

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[1] Pohang is a city of the east coast of South Korea. The Pohang University of Science and Technology was founded in 1986, has 3,000 students and is a reference to Asia in the field of Science. With its "Vision 2020", Postech aspires to reach the top research universities worldwide.

[2] The CFEL (Free Electron Laser Center) is a joint research group between the Max Planck Society, the University of Hamburg and the Deutsches Elektronensynchrotron (German Electron Synchrotron).

*Sources: June 2010*

*Electronic Bulletin, June 24, 2010*

*Dr. Berthold Neizert, Max Planck, International Relations Affairs - Phone: +49 (0) 89 2108-1270 - email: [neizert@gv.mpg.de](mailto:neizert@gv.mpg.de)*

### **10.35 Progress Report for the Pact for Research and Innovation (Germany)**

The Joint Scientific Conference (GWK) concluded its meeting on June 22 by releasing the 2010 Monitoring Report. This report confirms that the initiatives implemented by the Federal and Länders governments have positioned the German scientific system to compete effectively at the international level. The report noted that as competition intensifies, Germany can maintain its position on the international scene only by having a strong commitment to innovation .

The five year Pact for Research and Innovation originally ran through 2010, but has been extended until 2015. The pact commits the Länders and the Federal governments to increase their contributions to major research institutes (Fraunhofer Gesellschaft, Helmholtz Association, Max Planck Society, Leibniz Association and the German Agency for Research - DFG) to at least 3% each year, and 5% starting in 2011.

In turn, research organizations are committed to increasing the quality and effectiveness of their research activities. The monitoring was set up to evaluate the success of the objectives set by the pact. The state partners have not only met their goals for the period 2006-2010, but have also partially exceeded it.

The 4th monitoring report shows developments and progress in the following areas:

- Competitiveness has become a characteristic feature of major research organizations.
- The expansion of the frontiers of science in new fields of research is a concern of research organizations. Depending on their role and topics, every large organization has worked to develop new strategies to identify future research topics.
- The establishment of priorities and specific profiles has increased.
- Cooperation between different research organizations and institutions of higher education continues to grow.
- All research organizations have recognized that moving towards innovation is a priority.
- International networking is beneficial to science as a whole but also to the national system of innovation.
- Support for young researchers is one of the keystones of an efficient and productive scientific system.
- Promoting women in the world of science and research remains a central task in the viability of the German research system.

*Sources: June 2010*

*Electronic Bulletin, June 24, 2010*

*Gemeinsame Wissenschaftskonferenz (GWK) - Friedrich-Ebert-Allee 38 53113 Bonn - Phone: +49 228 5402 122 - email : [presse@gwk-bonn.de](mailto:presse@gwk-bonn.de)*

### **10.36 How Germany Attracts Young English Speaking Scientists**

Many young German scientists, who represent the science of tomorrow, are going to the United States, Canada or Great Britain. The reverse path for North American students coming to Germany is equally



attractive, as the German Academic Exchange Service (DAAD) with its aid program RISE - Research Internships in Science and Engineering - demonstrates it in its recently published report "Young Scientist Go German" [1] [2]. It includes experiences from RISE Scholars since 2005, year the program was launched, through 2009.

RISE is an opportunity for young students from North America or the UK to undertake a summer internship in Germany, conducting a research project in biology, chemistry, physics, earth science or engineering. Students spend 1.5 to 3 months in a research institute or university laboratory. During this period, English-speaking students learn a new way of thinking and working while getting many and varied impressions during their travels through Germany and Europe.

This program creates many long-term links with Germany, as statistics show: more than half of the former RISE scholars plan to return to Germany to study or work. Since its beginning in 2005 with 98 fellows, the program has grown enormously. This year, a record 1,400 students applied to the RISE program. The DAAD has accepted 304 candidates in the 2010 program. The RISE program has acquired a reputation in North America, and some American colleges have decided to partially fund their students to participate to the project. The RISE program is funded by the German Federal Ministry of Foreign Affairs. It is also financially supported by funds from the chemical industry, from the German Agency for Research (DFG), the American Chemical Society, as well as various companies and the German host institutions.

The annual gathering of RISE Scholars will be held in Heidelberg from July 8 to 10: the 300 program participants will receive information on studies and doctorates in Germany, visit companies, and of course exchange personal experiences.

*Sources: July 2010*

*- Electronic Bulletin, June 30, 2010*

*- [1] DAAD RISE program web site, Deutsche Akademische Austauschdienst - <http://www.daad.de/rise/en>*

*- [2] Manual for "Young Scientist Go German", <http://redirectix.bulletins-electroniques.com/ps1cb>*

### **10.37 Six New Research Units Established (Germany)**

*Topics Range from the Mamluk Period to Electronically Correlated Solids*

The Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) is setting up six additional Research Units to facilitate trans-regional and interdisciplinary cooperation among researchers. This decision was taken by the DFG's Senate at its summer session within the scope of the organization's annual plenary meeting in Berlin. The new networks are intended to provide researchers with the opportunity to address current and urgent issues in their fields and to develop new methods for tackling them.

The Research Units established are concerned with such issues as the role of molecule groups in neuro-physiological processes and ways in which correlated solids can be optimally analyzed using computer calculations. One of the new units established is a "DFG-Research College", a type of Research Unit specifically tailored to research methods in the humanities and social sciences. This Research Unit is characterized by a long-term, international approach, a concept enabling research into broad-based issues, in this case, the Mamluk era. Several of the Research Units established are interdisciplinary and international in nature, involving cooperation with India, Austria and Switzerland.

During the first funding period, the new Research Units will receive a total of 15.3 million Euros in funding over a three-year period (for the DFG-Research College, a four-year period). This brings the total number of DFG-funded Research Units to 215.

*Sources: July 2010*

*Detailed information on Research Units can be found at: [www.dfg.de/for/en/](http://www.dfg.de/for/en/)*

*DFG Press Release July 19, 2010*

### **10.38 DFG Aims to Strengthen Knowledge Transfer (Germany)**

*Closer Integration of Basic and Applied Research / Further Topics from Annual Press Conference: Equality, Flexible Use of Funding, Excellence Initiative*

The Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) aims to strengthen knowledge transfer and thus to achieve closer dialogue between basic and applied research. This was announced by DFG President Professor Matthias Kleiner on Thursday July 8, 2010 at the annual press conference held by Germany's central research funding organization in Berlin. *"Basic research will continue to form the focus of our activities. We do, however, want to do more to ensure that the discoveries and knowledge resulting from projects funded by us become even more effective"*, emphasized Kleiner, whose speech to the DFG's plenary assembly at the Humboldt University the previous day had focused on the issue of knowledge transfer.

Improved knowledge transfer could bring dual benefits, said the DFG president: *"On the one hand, it can lead to increased economic and social innovation and ensure that science generates economic strength. Primarily, though, it benefits science. It's a give-and-take kind of interaction. Knowledge transfer can raise new scientific issues, and these can, in turn, lead to further and better basic research."*

As Kleiner pointed out, the DFG has been supporting knowledge transfer in individual projects and various programs for 15 years. Until now, however, it has often been limited to the engineering sciences. *"There is, however, great potential for knowledge transfer in all areas of science and the humanities"*, the DFG President emphasized. He cited the example of the "Multilingualism" Collaborative Research Centre at the University of Hamburg, the results of which are being utilized in foreign language teaching in schools and in continuing education for bilingual hospital workers. In medicine, too, the intensive exchange of information between basic research and clinical practice could be mutually beneficial. From the DFG's perspective, one project involving research carried out by Leibniz prizewinner Professor Christoph Klein on cancer in children, and the Collaborative Research Centre in Hanover which focuses on cochlear implants for the deaf are excellent examples of how this works. Both projects were initially basic research projects, the results of which found their way into clinical practice and industrial production. From there, they provided additional impetus for further research.

Further topics addressed at the DFG's annual press conference included gender equality in research, additional benefits for the universities in the form of even more flexible use of DFG funds, and the launch of the second phase of the Excellence Initiative by the German federal and state governments. Two years after the publication of the DFG's Research-Oriented Standards on Gender Equality, Kleiner reported positively on the efforts made thus far to improve opportunities for female researchers. *"Our standards have given strong impetus to all universities, with promising measures being implemented everywhere"*, said the DFG President, referring to the detailed initial reports from the DFG members on the implementation of the standards. Twelve universities are, in the opinion of the DFG, particularly commendable: These are the Aachen University of Technology, the Free University of Berlin and the Humboldt University of Berlin, as well as the universities of Bielefeld, Bremen, Duisburg-Essen, Freiburg, Göttingen, Hamburg, Paderborn, Tübingen and Würzburg. They stand out because they have allocated funding specifically for implementing measures to improve gender equality, or because they have a member on their executive team in charge of this implementation.

In 2009, 2.7 billion Euros, including funding awarded for multiple years, was allocated to more than 17,000 research projects. Universities and other research facilities receiving funding are to be given greater freedom and flexibility in allocating DFG funds from now on. As Kleiner explained, these institutions should be able to decide for themselves where their needs lie and whether funds are to be used for personnel, direct project costs or equipment. For the future, the DFG will allocate fixed sums of money instead of funding fixed positions. *"This means that full coverage can be achieved among personnel funds, direct project funds and investment funds, a big step forward"*, said the DFG President. At the same time, however, he emphasized that this must not lead to reviewer recommendations being bypassed or DFG-financed researchers receiving lower salaries. *"Our funding process is becoming even simpler and less bureaucratic"*, Kleiner concluded. *"We're giving the universities more freedom – without simultaneously reducing their funding, as is so often the case."*

With an eye to the current situation in research and higher education politics, Kleiner once again thanked the German federal and state governments for continuing to provide full support for the Excellence Initiative, the Pact for Research and Innovation and the Higher Education Pact, despite the financial

crisis. With these pacts, around 18 billion Euros in funding will make its way into research and education by 2018, five billion alone of which will be channeled into basic research via the DFG. *"This sends a strong signal and gives both us and science and the humanities decidedly positive prospects."* The same, concluded Kleiner, applies to the second phase of the Excellence Initiative, which has been running since March and within the framework of which universities have submitted 247 declarations of intent for new projects. *"This demonstrates that there is still a strong level of interest in the competition to strengthen top-level research. There is certainly no sign of a decline in the number of proposals, as some people seem to think"* said Kleiner. He further stated that, compared to the first phase of the Excellence Initiative, the number of declarations of intent remains in proportion to the additional available funding volume. Kleiner said that the DFG has also advised the universities to apply the highest standards when making their internal project selections with the aim of submitting fewer but higher-quality applications. *"This message has obviously been received."* The next step is for the universities to submit draft proposals for new projects by September 1st in order to meet this year's review deadline. In spring 2011, the decision will be taken as to which projects will advance to compete with the 85 Excellence Institutions already receiving funding. The final decision on new Excellence Projects will be made in July 2012. *"This will be a tough and exciting competition"*, said the DFG President with conviction.

*Sources: July 2010*

*Further Information: DFG President Professor Matthias Kleiner's complete statement, as well as all other press releases pertaining to the annual press conference and the preceding annual general meeting, are available online at:*

[http://www.dfg.de/dfg\\_profil/reden\\_stellungnahmen/2010/100707\\_pk\\_jahresversammlung/index.jsp](http://www.dfg.de/dfg_profil/reden_stellungnahmen/2010/100707_pk_jahresversammlung/index.jsp)  
*DFG Press Release July 16, 2010*

### **10.39 Peter Funke Is New DFG Vice President (Germany)**

*Münster Professor of Ancient History Succeeds Frankfurt Early Modern History Expert Luise Schorn-Schütte / Samwer, Scholz-Reiter, Schüth and Wagner Confirmed for Second Term of Office in Executive Committee*

The Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) has a new vice president: on July 7<sup>th</sup>, 2010, Münster professor of ancient history, Peter Funke, was selected by the DFG's General Assembly in Berlin to join the Executive Committee of Germany's central research funding organisation. In doing so, Funke will take over the role of vice president in the area of the humanities from the Frankfurt expert on early modern history, Professor Luise Schorn-Schütte, who is stepping down from office at the end of her 6-year term.

In his new role, Funke aims to get involved in the discussion on "the future of the humanities and social sciences, their position in the research landscape and in their reinforcement, particularly in the area of basic research." Internationality, too, is an issue of special interest for the new vice president. He is particularly concerned with multilingualism in the humanities and social sciences, as well as what are known as the *Kleine Fächer* (lesser subjects), whose autonomy is being placed under increasing pressure through higher education policy and whose internationally leading position is, therefore, threatened.

DFG President Matthias Kleiner welcomed the new vice president as a "renowned scientist and an outstanding authority on the DFG". Funke has made a name for himself as a champion of scientific self-government in the most diverse roles. "Even outside circles of experts as well, Peter Funke has a great deal to say on science's role and responsibilities, and on those of the humanities in particular", Kleiner emphasised. "We are pleased to have been able to win this experienced and respected person for the Executive Committee."

Peter Funke is a professor of ancient history and Director of the Institute of Ancient History and the Institute of Epigraphy at the Westphalian Wilhelm University of Münster, where he also heads the Research Centre for Historical Geography of Ancient Greece. Born in Rheine in 1950, Funke studied history and German philology in Münster from 1969 to 1974. From there, he transferred to the University of Cologne, where he achieved his doctorate in 1978 and his habilitation in 1985. The ancient history

expert held his first professorship at the University of Siegen before being appointed to the Münster position in 1988.

In his research, Funke is concerned primarily with the history of the Greek states, from the Mycenaean era to the Roman period, as well as with the study of the historical geography and regions of the ancient world. He also focuses on ancient constitutional history and on the relationship between religion and power throughout antiquity. In the latter case, for example, Funke performs research on the role of cults and sanctuaries in ancient treaties. This work is carried out within the framework of the Münster Religion and Politics Cluster of Excellence, a programme funded by the Excellence Initiative.

Parallel to his research work, Peter Funke has been involved in scientific self-government for many years, as well as in research and scholarship funding. Among his other roles, Funke has served as Vice-Chancellor of Studies and Student Affairs at the University of Münster, and as Chairman of the Joint Educational Reform Commission for North Rhine-Westphalia and the New Media in Higher Education working group of the German Rectors' Conference. Since 1993, Funke has held the position of DFG Liaison Officer for the Cusanus scholarship body, whose advisory council he also heads. From 2004 to 2008, he led the Association of German Historians, a group that brings together science, politics and society at their conferences (*Historikertage*).

Within the DFG, Funke served as a review specialist for ancient history and as Vice Chairman of the Classical Studies Review Committee from 1996 to 2004. He then assumed the role of coordinator of the Ancient Cultures Review Board, in which he served from 2004-2005. Since 1995, he has also maintained close contact with researchers of all disciplines in his capacity as DFG Liaison Officer at the University of Münster. Finally, Funke has also been a member of the DFG Senate and Joint Committee and of the Senate Committee on Strategic Planning since 2005.

Within the DFG Executive Committee, Funke succeeds Luise Schorn-Schütte, who leaves office in Berlin. DFG President Kleiner paid tribute to the early modern history expert, who stepped down after six years in office. Schorn-Schütte has maintained a close relationship with the DFG since being awarded her own habilitation fellowship more than 20 years ago, and has been involved with the organisation in multiple capacities. "You have helped to shape the fortune of the DFG", Kleiner stated, and highlighted Schorn-Schütte's "clear and perspicuous thinking, love of expressive accuracy, and sensitivity for linguistic correctness". She has, Kleiner continued, driven and enriched a number of important debates, both inside and outside the DFG, including those revolving around German as a language of science and appropriate options for funding the humanities and social sciences through the Excellence Initiative.

In addition to electing Funke as the new vice president, the meeting in Berlin also re-elected four members of the ten-strong DFG Executive Committee for a second three-year term. These include physicist Professor Konrad Samwer, who, during his first term in office, focused primarily on the topics of Europe and the DFG Senate Commissions; engineering scientist Professor Bernd Scholz-Reiter, who has headed the Senate Committee on Strategic Planning since 2007; chemist Professor Ferdi Schüth, who has brought a great deal of impetus to his role as head of the working group responsible for formulating and implementing the DFG's highly regarded Research-Oriented Standards on Gender Equality; and IT specialist Professor Dorothea Wagner, who has focused her activities primarily on the areas of promoting young scientific researchers and knowledge transfer.

As well as President Matthias Kleiner, who was re-elected last year for a second term in office which will run until 2012, the new Vice President Peter Funke and the four re-elected vice presidents, the Executive Committee also includes additional Vice Presidents Professor Elisabeth Knust (developmental genetics), Professor Jürgen Schölmerich (clinical/internal medicine), and Professor Christine Windbichler (law). The President of the Donors' Association for the Promotion of Science and Humanities in Germany (Stifterverband für die Deutsche Wissenschaft), Dr. Arend Oetker, is a permanent guest. The Executive Committee is responsible for managing the DFG's day-to-day business, which is conducted by the DFG's Head Office under the supervision of Secretary-General Dorothee Dzwonnek.

*Sources: July 2010*

*Further Information: Detailed information on the members of the DFG Executive Committee, as well as print-ready photos, are available at:  
[www.dfg.de/dfg\\_profil/gremien/praesidium/index.html](http://www.dfg.de/dfg_profil/gremien/praesidium/index.html)  
DFG Press Release July 18, 2010*

#### **10.40 Inauguration of the KIC InnoEnergy in Karlsruhe (Germany)**

The Community of Knowledge and Innovation KIC InnoEnergy was officially launched on July 7th at the Castle of Karlsruhe [1]. Only a few months after the approval of the European Institute of Technology (IET) [2], partners can now present their first results.

KIC InnoEnergy Program treats subject such the supply of renewable energy: 35 European partners, companies, universities and research institutes gather to develop a durable energy system, to transfer more rapidly on the market new energy technologies reinforcing the world competitiveness of Europe.

The Institute of Technology of Karlsruhe (KIT) coordinates the structure as a whole. The KIC InnoEnergy is subdivided in six centers in eight European countries. Each one coordinates an important set of themes for the partners of the consortium. Each center must receive subsidies from its local authorities. In the case of Germany, the Land of Bade-Wurtemberg has already confirmed its financial aid. *"Close links between the industry, research, teaching like interconnection of science and innovation are the trade mark of KIC InnoEnergy"* underline Prof Hans-Jörg Bauer which coordinates the KIT organization. The consortium envisages, during the next four years, to deposit 65 patents in the energy field and to create about 50 new companies. Ninety new products should also be launched. The program will propose a master and/or doctorate degree to 1,500 students.

The one-day conference "Cleantech Venture", which takes place this year in the six centers of the KIC, aim at inter-connecting ideas and investors, initiating the development of new technologies.

*Sources: July 2010*

*- Electronic Bulletin, July 8, 2010*

*- [1] KIC InnoEnergy : <http://www.innoenergy-initiative.com/>*

*- <http://eit.europa.eu/kics1/kic-innoenergy.html>*

*- [2] <http://eit.europa.eu>*

#### **10.41 Three New Research Centers in Bavaria (Germany)**

The Joint Scientific Advisory Board and Scientific Conference (GWK) gave their green light for the creation of three new research centers in Bavaria:

- The Research Center for Molecular Biosystems **BioSysM** on the high technology campus Großhadern/Martinsried at the Ludwig-Maximilian University of Munich (LMU)
- The **CALA** Research Center on Lasers on the campus of Garching, attached to the Ludwig-Maximilian University (LMU) and to the Technical University of Munich (TUM)
- The **CARISSMA** Research Center on Automotive based at the Graduate School of Applied Sciences Ingolstadt

*Measures to support these research facilities:*

Applications from the Länder to request support for these research structures have been submitted to the Scientific Council. The Board recommends to the GWK research projects that could be supported.

Choices reflect the accurate description of the case, the assessment under the financial situation and a series of projects. Requirements for initial selection are: that the proposed infrastructure be primarily research with a higher importance for the region, and that investment costs be higher than five million Euros. For the review and preparation of the Scientific Council, a committee for research structures has been established. It gathers 15 researchers, each with one vote, the German federal government with 8 votes and 8 Länder representatives having one vote each.

*Sources: July 2010*

*- Electronic Bulletin, July 8, 2010*

- CALA: [http://portal.mytum.de/pressestelle/pressemitteilungen/news\\_article.2010-07-06.7276585751/newsarticle\\_view?](http://portal.mytum.de/pressestelle/pressemitteilungen/news_article.2010-07-06.7276585751/newsarticle_view?)
- CARISSMA: <http://www.haw-ingolstadt.de/iaf/carissma.html>
- GWK: <http://www.gwk-bonn.de/>
- Press release from the Bavarian Ministry for Science, Research and Arts, July 5, 2010: <http://www.stmwfk.bayern.de/Presse/PressemeldungenDetail.aspx?NewsID=2231>
- Article published by the German Training Society: <http://www.bildung-fuer-deutschland.de/gwk.html>
- Article from the Fachhochschule Ingolstadt: <http://www.haw-ingolstadt.de/iaf/carissma.html>

#### **10.42 New Record for the German Ministry for Education and Research Budget**

Compared with the current year's, the 2011 budget of the Federal Ministry for Education and Research (BMBF) is expected to grow from 783 million Euros to a total of 11.646 billion Euros. This represents an increase of 7.2%! The Federal Minister for Education and Research, Annette Schavan said that despite pressure from consolidation of the state budget, the government made efforts to continue investing in the future.

Among the key points of investment are education of young people and strengthening of the training of skilled personnel. For the announced increase of BAfG (system of scholarships and student loans), BMBF is allowing 160 million Euros. The pillars of the Act for Higher Education (increased number of university places and improvement of research in institutions) will also benefit from the new government's effort: 910 million Euros will be spent in 2011.

In partnership with the Länder, the Federal Government decided to establish a third pillar of the Act for Higher Education: the Quality of Education Act. The German government will allocate in 2011 140 million Euros. For the Excellence Initiative, the BMBF is planning to invest about 327 million Euros in 2011. The training will be reinforced through the program by promoting training in open universities with a budget of 250 million until 2018. For the young children's education, BMBF is joining the Federal Ministry for Women, Seniors, Families and Youth by investing 100 million Euros in 2011. In addition, with the support of the Federal Agency for Work, BMBF will develop part-time leadership for career and volunteers in colleges. They will monitor and advise students on a continuous basis several times a year.

The federal government extends its support to key research institutions. Institutional support of BMBF will increase by 233 million Euros compared to 2010. Thus, the construction of German Research Centers for Health is a key point of the government coalition's agenda. The project financed in the field of life sciences will also be greatly increased to about a half billion Euros. For new technology (709 million Euros), the focus being on electric mobility. The project "Climate, Energy and Environment" will be funded for a total of 368 million Euros. This should help develop innovation in the fields of electric, storage of electricity using batteries and photovoltaics.

One hundred and thirty one million are planned in 2011 for instruments to support the Hightech Strategy. They will be divided between state-of-the-art program cluster and programs supporting the validation of the innovation and research campus collaborating with industry.

*Sources: July 2010*

*Electronic Bulletin, July 15, 2010*

*"Haushalt des BMBF erreicht Rekordniveau", BMBF press release – July 7, 2010 - <http://www.bmbf.de/press/2897.php>*

#### **10.43 Two Center for Biotechnology Groups in Dresden receiving EU funding (Germany)**

The European Research Council (ERC) decided to allocate for the first time Starting Grants to scientists from Dresden (Saxony) under the third call for proposals of the ERC. Ralf Siedel and Erik Schäffer, who lead groups of young researchers within the Center for Biotechnology (BIOTEC) of the Technical University of Dresden (TUD), will each accept up to 1.5 million Euros for the next five years.

Ralf Seidel will pursue his research on "DNA motors". He is since 2006 responsible for a research group



at BIOTEC. His project deals with the mechanics and dynamics of structures based on chromosomes, in which our genetic information is densely compacted.

Since 2007, Erik Schäffer leads a research group in nano-mechanic at BIOTEC. Using funding from ERC he intends to explore new optical technologies to study the frictional forces in nano-molecular machines.

*Sources: July 2010*

*Electronic Bulletin, July 23, 2010*

*Katrin Boes, Press responsible BIOTEC - Phone: +49 351 463 40347 - email: [katrin.boes@crt-dresden.de](mailto:katrin.boes@crt-dresden.de)*

#### **10.44 The DFG Sets Up Six New Research Groups (Germany)**

Six new research groups were selected at the last meeting of the German Agency for Research (DFG). As with previous projects, the teams are cross-regional and transdisciplinary. Among the topics covered are for example the role of both groups of molecules in the neuro-physiological processes that optimize the correlation between solid bodies using computer algorithms. One team is organized in college, studying the methods of work in literary and social sciences. Finally, many research groups are collaborating with scientists from Switzerland, Austria and India.

The groups are funded initially for a period of 3 years (for college research group, this period is extended to 4 years). DFG is investing 15.3 million Euros for all new groups. It supports 215 research groups (2009 budget: EUR 101 million).

*Sources: July 2010*

*- Electronic Bulletin, July 23, 2010*

*- Additional information available at: <http://www.dfg.de/for>*

#### **10.45 Partnership Project Between The Engineering Technical University Of Dresden And Switzerland (Germany)**

The Technical University (TUD) of Dresden (Saxony) is the partner university of the first transnational project engineering in the D-A-CH program (cooperation between Germany, Austria and Switzerland). The partner of the Swiss side is the Federal Institute of Technology Zurich (ETHZ). The cooperation project will focus on numerical and experimental tests on the behavior of magnetic suspension flows. Over a period of two years, the project will receive a total funding of 300,000 Euros, half of which is supporting the chair of magnetic fluid dynamics in Dresden under the coordination of Professor Stefan Odenbach, the rest being attributed to the ETHZ Institute for Polymers coordinated by Patrick Ilg.

The International D-A-CH program launched in 2003 is a cross-border financing (Money follows Researchers) with a mutual opening of financing (Money follows Cooperation Line) between Germany (D), Austria (A) and Switzerland (CH). The aim is to facilitate the mobility of researchers pursuing cross-border projects. Partners include the DFG, the Swiss National Fund (SNF) and the Austrian Agency for Scientific Research (FWF). Since 2008 cooperation in the D-A-CH was strengthened with the establishment of joint assessments of projects.

*Sources: July 2010*

*- Electronic Bulletin, July 23, 2010*

*- Prof. Stefan Odenbach - Phone: +49 351 - 463 - 32062 - email: [Stefan.Odenbach@tu-dresden.de](mailto:Stefan.Odenbach@tu-dresden.de)*

#### **10.46 Germany wants EU to plug 'innovation gap'**

The EU's new innovation strategy must do more to link research, education and entrepreneurship if it is to tackle Europe's "innovation gap", Dr. Georg Schütte, Germany's junior minister for education and research.

Germany wants to see the European Research Area anchored in the European Plan for Research and Innovation, and is pushing for less red tape as well as mutual recognition of common national funding procedures.

"We expect a clear commitment to the principle of excellence and to a simplification of procedures and reduced bureaucracy at national and European level," said Schütte, state secretary at the German Federal Ministry of Education and Research. He also expressed optimism that discussions on priorities for the EU budget will result in more cash for research. The German federal government outlined its views in a guideline paper presented to the European Commission earlier this year. For its part, Schütte said Germany is working to strengthen links between science and industry as part of its High-Tech Strategy 2020. "This will enable the rapid and efficient commercial exploitation of scientific findings. [The strategy] will continue to promote exchanges between institutions of higher education, non-university research institutes and companies and will strengthen the process of knowledge and technology transfer. Research results can thus be translated more rapidly into innovations, both on the market and in society," he said.

Meanwhile, Schütte believes Germany will continue to spend more on research. Germany currently devotes 2.64% of GDP to science – the highest figure since reunification. "This means there has already been an enormous boost and we are determined to keep the momentum in the next few years," said Schütte, adding that the 3% target set out in the Europe 2020 growth strategy is achievable.

*Sources: August/September 2010*

*To read the interview in full, please click here.*

*[www.EurActiv.com](http://www.EurActiv.com) Published on August 19, 2010*

#### **10.47 BMBF enhances the Franco-German University**

The Federal Ministry for Education and Research (BMBF) decided to grant additional funding of 500,000 Euros to the Franco-German University (DFH-UFA) for the year 2010. This decision follows the Franco-German Agenda 2020, which provides an extension of the UFA.

Last February, during the Franco-German Meeting, a doubling the number of students and doctoral students of the UFA 2020 (*UFA, Franco-German University*) was envisioned. The Federal Minister for Education and Research, Annette Schavan said that "*it is in the interest of both countries to achieve the preconditions for reaching this goal.*" Germany, through this additional funding, has made its contribution.

The UFA may set in motion many extension projects as well as improve the Franco-German curriculum and doctoral programs. There is continued strong interest for joint French/German courses within the academic institutions in both countries. UFA provides through its scholarship programs a financial framework for the exchanges and for the administrative support requirements. As a result of the additional German funds a greater number of students will benefit from the programs. Currently, nearly 5,000 students are members of the UFA in 130 dual-degree courses.

*Sources: August/September 2010*

*Electronic Bulletin, September 1, 2010*

*Dr. Jochen Hellmann - Phone: +49 681 938 12103 - email: [hellmann@dfh-ufa.org](mailto:hellmann@dfh-ufa.org)*

*Franco-German University web site: [www.dfh-ufa.org](http://www.dfh-ufa.org)*

#### **10.48 Twenty Years of Research Training Groups (Germany)**

**A Successful Model for Doctoral Training**

A successful model turns twenty: In September 1990 the first DFG Research Training Groups for the promotion of early career researchers took up their work. Since then, about 20,000 researchers have successfully completed their doctorates in RTGs, which for many of them became stepping stones to careers within science and the humanities or outside them. The evolution of Research Training Groups is also highlighted in a newly published anniversary brochure in which exemplary projects are presented and various participants share their experience.

*Sources: August/September 2010*

*DFG Web Site, published on September 1, 2010*

*Full article available at:*

*[http://www.dfg.de/en/service/press/press\\_releases/2010/pressemitteilung\\_nr\\_44/index.html](http://www.dfg.de/en/service/press/press_releases/2010/pressemitteilung_nr_44/index.html)*

#### **10.49 Excellence Initiative: 227 Draft Proposals for New Projects (Germany)**

*Preliminary decision in March 2011 / DFG President Kleiner: "Great interest, tough contest"*

Universities across Germany have submitted their draft proposals for new projects and institutions in the second phase of the competition for funding of top-level research. By the 1 September deadline, the DFG has received 227 draft proposals — 98 for graduate schools, 107 for clusters of excellence, and 22 for institutional strategies to promote top-level research. These first-time proposals were submitted by 65 German universities. All major disciplines — life sciences, natural sciences, engineering sciences, as well as the humanities and social sciences — are represented about equally. The draft proposals will now be reviewed until January 2011. In March 2011 it will be decided which of them will compete in the final round against institutions already being funded.

*Sources: August/September 2010*

*DFG Web Site, published September 3, 2010*

*Full article available at:*

*[http://www.dfg.de/en/service/press/press\\_releases/2010/pressemitteilung\\_nr\\_45/index.html](http://www.dfg.de/en/service/press/press_releases/2010/pressemitteilung_nr_45/index.html)*

#### **10.50 "Forum for Innovation" - Six projects in the new Länder (Germany)**

The "Forum for Innovation" program initiated by the Federal Ministry of Education and Research (BMBF) made its 17th series of awards to the new federal states (former Eastern Germany).

Through this program launched in 2001, 114 networking and cooperative initiatives have been supported. Over 90% of the projects supported are still active today, which according to Minister Annette Schavan *"shows that our grants have been well invested. The regions enjoy a good collaboration between the scientific and economic actors."*

The BMBF makes grants of up to 85,000 Euro for a period of six months for the development of innovative alliances around unique and attractive technologies or industries. The topics are broad, ranging from materials for a thermoelectric cooling storage system to a command and control system for motors. Awardees must hold a two-day forum in which politicians, economists and regional scientists can meet potential partners and competitors from all over Germany and abroad.

This year's selected projects were from Saxony, Berlin and Thuringia.

*Sources: October 2010*

*Electronic Bulletin, September 30, 2010*

*Press release from BMBF – September 16, 2010 - <http://www.bmbf.de/press/2942.php>*

#### **10.51 Alexander von Humboldt Foundation Presents the 2010 Sofja Kovalevskaja Awards (Germany)**

For the 5th time, the Alexander von Humboldt Foundation (AvH) will present the Sofja Kovalevskaja Award to talented young researchers. This award is funded by the Federal Ministry of Education and Research (BMBF). The goal is to provide these young researchers with the capital to start innovative projects while they are at the beginning of their careers.

This award allows promising young researchers to discover the world of German research. The exchange benefits to both the German research community and its researchers. The message is: *"In Germany, the ability to invest and take risks also exists"*.

Eighteen young researchers will receive up to 1.65 million Euros (\$2.3 million) when the awards are made on November 9. Researchers, aged 29 to 38, are welcomed in a German research institute where they will develop their own research team and conduct their research for the next five years. This award frees researchers from administrative and financial constraints. The winners are a Russian, a Brazilian, a Spaniard, an Austrian, two Italians, a Japanese, three Germans and eight Americans.

*Sources: October 2010*

- *Electronic Bulletin*, October 7, 2010  
 - Awardees: <http://www.humboldt-foundation.de/web/skp-2010.html>  
 - "TU Berlin: Japanischer Spitzenforscher kommt an die TU Berlin", released on Sept 28, 2010 - <http://idw-online.de/pages/en/news388620>  
 - "Alexander von Humboldt-Stiftung vergibt Sofja Kovalevskaja-Preise 2010", Kooperation-international press release Sept 30, 2010 - <http://redirectix.bulletins-electroniques.com/XYehN>

### **10.52 DFG to Establish Eleven New Collaborative Research Centres (Germany)**

*Topics range from spontaneous self-organization of soft matter and neuronal systems to the origin of the Milky Way or the effect of calcium ion signals in the body*

The Deutsche Forschungsgemeinschaft (DFG, German Research Foundation) will establish eleven new Collaborative Research Centres (CRC) as of 1 January 2011 with a total of € 94.4 million (~\$135 million) (including a 20 percent program allowance for indirect project costs) for an initial funding period of four years.

The new centres' research topics will range from new methods for filtering information from large amounts of data to fundamental questions of astrophysics, and cellular biology. In addition, the Grants Committee agreed to extend 15 CRCs for an additional four-year funding period. As of January 2011, the DFG will thus be funding a total of 238 Collaborative Research Centres.

Among the topics at the centers are the following:

- Control of self-organizing non-linear systems, Berlin Institute of Technology;
- Cellular mechanisms of sensory processing, University of Göttingen;
- Collective behavior of soft and biological matter, University of Göttingen;
- Development and functionality of the Milky Way, University of Heidelberg;
- Conditions and effects of star formation – astrophysics, instrumentation and laboratory, University of Cologne (with the University of Michigan);
- Cooperative effects in homo- and hetero-metallic complexes (3MET), Technical University of Kaiserslautern;
- Physiology and dynamics of cellular micro-compartments, University of Osnabrück;
- Ca<sup>2+</sup> signals: molecular mechanisms and integrative functions, Saarland University.

*Sources: November 2010*

*The full Press Release released on November 17, 2010 is available at:*

[http://www.dfg.de/en/service/press/press\\_releases/2010/pressemitteilung\\_nr\\_65/index.html](http://www.dfg.de/en/service/press/press_releases/2010/pressemitteilung_nr_65/index.html)

### **10.53 Germany Allocates 2 Billion Euros for Education Quality**

On November 23rd, the Federal Minister for Education and Research, Annette Schavan, kicked off one of the major projects of the current German parliamentary session – improving teaching in higher education. A "Pact for Quality Education" has been established between the federal (Bund) and state (Länder) governments. By 2020, Germany will provide nearly two billion Euros for improving higher education.

This project is divided into several actions. In addition to assigning additional staff, German universities will engage better qualified teachers and tutors and also encourage creativity in order to improve teaching. The minister hopes this will meet the students' expectations for quality instruction.

The Pact for Quality Education, along with the 2020 Pact for Higher Education and the Excellence Initiative, are the pillars contributing to the competitiveness of the university system. The Excellence Initiative and the Pact for Higher Education should offer new opportunities to study and strengthen the research capacity of institutions. The Pact of Quality Education is aimed at making the German university system even more attractive.

Grants will be distributed throughout the German university system according to different criteria including

quality. The applications of each institution will be reviewed by an expert panel composed of scientists, teachers, and also students. In order to encourage institutions to take a long term vision, grants may be up to 5 years with a possibility of renewal until December 2011.

*Sources: December 2010*

*Electronic Bulletin December 9, 2010*

*[1] Page internet du BMBF sur le pacte de qualité pour l'enseignement (en allemand) :*

*<http://www.bmbf.de/de/15375.php>*

#### **10.54 Germany Bids on Teaching and Research**

In 2011, the budget of the Federal Ministry of Education and Research (BMBF) will increase of 782 million Euros compared to 2010, reaching 11,646 billion Euros. This represents an increase of 7.2% made possible thanks to the additional 12 billion Euros from the current government.

Particular attention is paid to promote opportunities for education and training available to everyone. The improvement of scholarship aid to education BAföG (system of scholarships and student loans) is one of the consequences. So for 2011, an increase of 162 million Euros for BAföG is planned. Structural measures, such as the Pact for Higher Education, were also adopted. For the establishment of new university places, 600 million were announced in 2011. By 2015, the federal government supports the regions in expanding their capacity of students with additional 3.6 billion Euros. The BMBF also puts in place "drivers education" who will personally advise the students and high school students in vocational schools (Haupt and Förderschule) to choose their training.

For 2011, the federal state will make available more than 4 billion Euros to the German research organizations, and focusing on the German system of research and innovation as a key factor in international competition. In 2011, the research project will receive 1, 2 billion Euros, focusing on the thematic strategy Hightech: climate / energy, health / nutrition, mobility (especially electromobility), communication and security. In addition, the system will benefit from new innovation tools such as advanced cluster support or "Program for advanced research and innovation" support by the Länder, for a total of 324 million Euros - 41 million more than in 2010.

*Sources: December 2010*

*Electronic Bulletin December 9, 2010*

#### **10.55 More than 100 billion Euros Spent on Education in 2010 (Germany)**

As part of the financial report on education in Germany, presented on December 1<sup>st</sup>, 2010, the Federal Minister for Education and Research Schavan announced a special effort investing in education: more than 100 Billion Euros were invested in 2010.

In total, the Federal State, Länder and cities spent 102.8 billion Euros, or 4 billion more than in 2009, 18% growth over 2005 (86.7 billion Euros) and 35% compared to 1995. The budget share than Germany spends on education rose from 13.9% in 1995 to 18.1% in 2010. A 2008 agreement between the Federal Government and the Länder states that Germany needs to invest by 2015 10% of its GDP in education and research. To achieve this goal, an additional 12 billion Euros will be invested during the current legislature.

The Statistics federal agency has published its report (Bildungsfinanzbericht) on behalf of the Federal Ministry of Education and Research (BMBF) of funding for education since 2008 in partnership with the Joint Conference of Rectors (KMK).

*Sources: December 2010*

*Electronic Bulletin December 9, 2010*

*Rapport 2010 (en allemand) : <http://redirectix.bulletins-electroniques.com/sLmLc>*

## 11 Hungary

### 11.1 Fourth World Science Forum in Budapest (Hungary)

The fourth World Science Forum was held in Budapest from 5 to 7 November. Scientists from 92 countries met and reflected on the theme "Knowledge and Future".

During three days of conferences, the following topics were discussed:

- Women in Science
- Funding of scientific projects in a global changing economy
- Science and Environment
- Innovation Policy Science and Technology for Sustainability
- Science and Communication
- Science and Youth
- The Mobilized Politic for Science - Science for policy to address global challenges.
- World Science Forum

For three days, scientists gathered in Budapest and reflected on and discussed the way in which science could deal with many problems: global economic crisis, climate change, food shortages, rising energy demand, etc. In 1999, UNESCO and ICSU, in partnership with the Academy of Sciences of Hungary and the Hungarian government had organized the World Conference on Science. The objective of this first conference was to define new roles and challenges of science in modern society. With the success of this event, the Hungarian Academy of Sciences initiated the organization of the World Science Forum. These events are held every two years in Budapest and repeat the same objectives as the World Conference on Science.

*Sources: January 2010*

*Electronic Bulletin, January 5, 2010*

<http://www.sciforum.hu/>

### 11.2 Hungary, a Leader in Biotechnology

A recent study published by EuropaBio (European Association for Biotechnology) in partnership with Venture Valuation (Swiss company), reveals that Hungary is a model country in the field of biotechnology.

Hungary is the birthplace of biotechnology. In 1919 the Hungarian engineer Károly Ereky was the first to define the term "biotechnology" as the use of methods, resources and biological processes for industry, technology, or research. According to experts, Hungary occupied a very important place in this area before the Second World War, particularly for its mass production of acetic acid. Hungary was also the first to commercially produce vitamin B12 and to use enzymes from bacteria to produce beer.

The current study was conducted in the twelve new member states of the European Union, plus Croatia and Turkey. The majority of participating companies are located in the Czech Republic, Estonia, Hungary and Poland. In the 14 countries surveyed, 10,000 people work in the biotechnology sector and 1,900 are involved in R&D. Annual revenues of the 260 firms in this study amounted to 345 million Euros and 19 million were spent on research and development.

Regarding Hungary, more than 1,000 people are working in 77 companies specializing in biotechnology, with 40% of the workers involved in R&D. Hungary has important centers of diagnostic and analytical research. General research and bioinformatics activities are also prominent. Five million Euros have been invested in the biotechnology sector in Hungary.

*Sources: January 2010*

*Electronic Bulletin, January 5, 2010*

<http://www.europabio.org/positions/general/IndecsHBiotechreport.pdf>

### 11.3 Presidents of the Hungarian Academy of Sciences and the Chinese Academy of Social Sciences signed an agreement of co-operation on Tuesday in Budapest (Hungary)



The scientific leaders of the two countries hope that the agreement will foster close co-operation between Hungary and China in the field of social sciences.

In the fields of natural sciences the co-operation between our academies has a traditionally good reputation, thus I am really glad this agreement is going to take the co-operation between social scientists of our countries to the next level as well, said President of HAS [József Pálincás](#) at the formal meeting with President of the [Chinese Academy of Social Sciences](#) (CASS) professor [Chen Kuiyuan](#), and his delegation. In his response, the head of the Chinese delegation said: science transcends borders, and by signing this agreement a gate of possibilities have opened up for our respective social scientists.

József Pálincás and Chen Kuiyuan signed an agreement for a four-year co-operation from 2010 through 2014 in the Concert Hall of the Academy. The two parties agreed to continue and expand the scope of co-operation throughout the fields of social sciences. Invited to the ceremony were directors of HAS' Institute for Political Science, the Institute of History, and the Institute of Ethnology, with whom the members of the Chinese delegation and the Deputy General Secretary of HAS discussed the details of possible joint research projects.

Besides President of HAS József Pálincás, Deputy General Secretary [Valéria Csépe](#) also represented the Hungarian Academy of Sciences at the meeting. Among the members of the Chinese delegation were Ambassador of the People's Republic of China to Hungary [Gao Jian](#), Director of CASS' Institute for European Studies Dr. Zhou Hong, and Deputy-Director the International Department of CASS Dr. Wang Lei.

*Sources: June 2010*

*Hungarian Academy of Science Web Site:*

[http://www.mta.hu/index.php?id=858&no\\_cache=1&backPid=856&tt\\_news=128305&cHash=cb612b87f6](http://www.mta.hu/index.php?id=858&no_cache=1&backPid=856&tt_news=128305&cHash=cb612b87f6)

#### **11.4 The European Academies Science Advisory Council Meets In Budapest (Hungary)**

On June 17-18, the principal members of the European Academies Science Advisory Council (EASAC) met in Budapest to evaluate the current functioning of EASAC and reflect on the future of the organization.

Twice a year, EASAC meets in the country preparing for the presidency of the European Union. Thus, a meeting was held on the premises of the Hungarian Academy of Sciences in Budapest on June 17-18. On this occasion, the newly elected Bureau was officially appointed comprising the President, the British biologist Sir Brian Heap, and three vice-presidents, the physicist and president of the Hungarian Academy of Sciences József Pálincás, the physicist and vice president of the Swedish Royal Academy of Sciences Sven Kullander and the vice-president of the Royal Academy of Arts and Sciences of the Netherlands Jos van der Meer.

During these two days, scientists examined the organization and its financial situation. They also reviewed reports made by individual scientists and voted on their publication. They agreed on actions to be taken next year, including writing reports on current topics like synthetic biology, infectious diseases in Europe, biodiversity and ecosystem services, sustainable biofuels and adaptation to climate change.

In his speech, Sir Brian Heap recalled the important role played by EASAC to the EU institutions. He also said that according to him, the future activities of members of EASAC should be concentrated around the areas that become troublesome because of the large and rapid increase of world population: sustainable development, rational use, climate change, and food security.

*Sources: July 2010*

*Electronic Bulletin, July 8, 2010*

#### **11.5 Inter-Academy Collaboration Between Finland and Hungary**

In conjunction with the Finnish Prime Minister Mari Kiviniemi's visit to Budapest, the President of the Academy of Finland, Markku Mattila, and the President of the Academy of Sciences of Hungary, József

Pálinkás, signed a collaboration agreement that will remain in force until 2013. The main objectives of this agreement are the promotion of quality research, a more rapid application of theoretical results and better utilization of resources in the context of international cooperation.

Collaboration between Finnish and Hungarian scientists and researchers was initiated in 1975 when the directors of the Hungarian Academy signed an initial agreement with their Finnish counterparts.

The two academies have already cooperated on many projects in various fields. The Hungarian Academy's Institute of Nuclear Research and the Research Institute of Geodesy and Geophysics enjoy very good relations with their Finnish partners, and the Institute of Literary Studies regularly works with researchers in Finland. The Hungarian Academy Institute for Research in Computer Science and Control has participated in numerous European projects alongside Finland and the Institute for Research in Biophysics and Biology regularly collaborates with the Helsinki University of Technology.

*Sources: November 2010*

*Electronic Bulletin, November 12, 2010*

*"Interacademy Collaboration between Finland and Hungary" - Hungarian Academy of Sciences (21/09/2010) : <http://redirectix.bulletins-electroniques.com/f3nOg>*

## **12 Ireland**

### **12.1 Ireland Continues to Attract Foreign R&D Investment**

The Industrial Development Agency (IDA), responsible for attracting foreign investment in Ireland, recently presented the results of its activity for 2009 showing that 125 foreign companies have invested in Ireland, creating 4,500 jobs. Investment in R&D accounted for 49% of the total and amounted to 500 million Euros.

The Irish economy is dependent on the presence of foreign companies that have chosen Ireland for installing subsidiaries (production and R&D facilities). Together these companies employ almost 136,000 people in Ireland and generate €110 billion (70%) of total Irish exports. Three-quarters of Irish R&D comes from foreign firms.

Major investments in R&D in 2009 include:

- A €50 million investment and 50 new jobs by Hewlett-Packard in Galway in "cloud computing" and "customer support". HP has also strengthened its partnership with the CRANN, the center of nanotechnology research from Trinity College Dublin and has invested 3.7 million Euros;
- Microsoft has installed a data center at the outskirts of Dublin for an investment of €340 million and create 50 new jobs;
- IBM has strengthened its Irish R&D Center in the areas of management and risk analysis. In addition to these investments in R&D, many technology companies have strengthened their presence in Ireland including Facebook, which has doubled the number of employees at its European headquarters based in Dublin, and McAfee, which has created 120 jobs in its subsidiary in Cork

*Sources: January 2010*

*- Electronic Bulletin, January 18, 2010*

*- Science Foundation Ireland : Minister Lenihan announces Joint Nano Research Initiative between HP and CRANN*

*- Science Foundation Ireland : IBM Expands Analytics and Risk Management Capability in Ireland  
Computerscope, November 2009 : HP expands R&D facilities in Galway.*

### **12.2 Ireland Makes €7.9 Million Available For Young Researchers**

Ireland has launched a new scheme to support the research projects of young post-doctoral scientists. The Science Foundation in Ireland, the main agency responsible for funding research in Ireland, will spend €7.9 million to support the research of 15 post-doctoral students at the point of their scientific careers when help is most critical. Each project will receive between 471,000 and 590,000 Euros over 5 years. The themes selected are energy, cancer, genetics, and telecommunications.

*Sources: January 2010*

*Electronic Bulletin, January 18, 2010*

*Science Foundation Ireland : <http://redirectix.bulletins-electroniques.com/mOnSq>*

### **12.3 Science Budget Preserved in Ireland for 2010**

The 2010 Irish budget for science and technology will suffer a slight decline of around 4.4% compared to last year. This reduction preserves the research sector in Ireland which is clearly a priority for the government. This decrease is compared to the 12% decrease in the overall public budget for Irish capital expenditures.

For 2010, the Department for Enterprise, Trade, and Employment, which drives science policies, has been allocated a budget of 297.3 million Euros for research (-4% compared to 2009). The Science Foundation of Ireland, the agency through which academic research funds are allocated in Ireland, will receive 162 million Euros (-4.9%). Enterprise Ireland, the economic development agency, will receive 129 million Euros to support Research and Development (-3.6%) in businesses and foster innovation. In recent years, more than 40% foreign direct investment (FDI) from foreign companies in Ireland were for R&D&I (Research, Development and Innovation) amounting to 400 million Euros annually. Supporting this area is vital for the economy and enhances Ireland's international attractiveness.

The remaining funds for science are divided between different departments that have small budgets to fund targeted work in their field of competence. In particular, the Ministry of Communications, Energy and Natural Resources has 26 million to conduct underwater exploration work or to finance pilot projects on energy from the ocean.

*Sources: January 2010*

*Electronic Bulletin, January 18, 2010*

### **12.4 2009: a record year for the creation of innovative companies in Ireland**

The Irish Universities Association (IUA) has published the annual review of spin-offs from academic research. The year 2009 saw the creation of 35 spin-offs in Ireland, a figure well above the 10 in 2008. Half of these companies are active in the field of information technology, others in the biosciences and food. The licensing of technologies developed in academic laboratories also saw strong growth in 2009 with 102 licenses sold compared to 33 in 2008. These figures include statistics from seven Irish universities, the Royal College of Surgeons in Ireland (the Faculty of Medicine, Dublin) and the two largest institutes of technology, Dublin Institute of Technology and Waterford Institute of Technology.

According to the IUA, it takes 20 million Euros to create a new company in Ireland, compared to 30 million in the United Kingdom and 50 million to the US. Institutions of higher education and research in Ireland have a 'Technology Transfer Office' which is responsible for the development of academic work that goes into business creation and technology commercialization.

More broadly, the economic development agency in Ireland (Enterprise Ireland) has announced having funded 73 start-ups in 2009. These companies should create over 900 new jobs over the next three years and generate a turnover of 600 million Euros, over 80% of which will go into exports.

Among university spin-offs are:

- Equinome, building on work at University College Dublin, develops genetic tests to help determine the optimal distance that a horse can run. It follows the identification of a "gene for speed" in the Pur Sang.

- Luxcel Biosciences, growing out of research at University College Cork, is developing fluorescent sensors to analyze the levels of oxygen and pH in cells for the study of mitochondrial activity. These sensors are intended primarily for pharmaceutical and food companies. The company has just raised 2.5 million Euros for its development.

- Blue Box Sensors, from NUI Maynooth near Dublin, makes micro-sensors that can record the level of chemical components (NO, O<sub>2</sub>, Glucose) in the brains of animals in real time over periods of several weeks or months. The equipment will be manufactured in Galway, in western Ireland. The company is currently seeking authorization from the U.S. Food and Drug Administration (FDA).

- Beemune Ltd., also out of NUI Maynooth near Dublin, produces food supplements for the bee colonies used for agricultural pollination. These food supplements, containing natural products, are expected to strengthen the immune system of bees and improve their ability to withstand attacks on their environment.

*Sources: March 2010*

- *Electronic Bulletin*, March 29, 2010

- *Equinome* - <http://www.equinome.com/>

- *Blue Box sensors* - <http://www.blueboxsensors.com/>

- *Luxcel* - <http://www.luxcel.com/>

- *Beemune* - <http://www.beemune.com/>

## **12.5 Strategic rapprochement of two Irish universities (Ireland)**

Universities of Galway and Limerick in western Ireland have announced a strategic merger designed to promote economic development in the region. The combination of the two institutions will involve close collaboration in the fields of medical instrumentation, green technologies and software engineering that meet the regional industrial fabric. Universities have well set up exchange programs for students who may choose modules taught in the universities, creating a medical school and developing a joint doctoral program in multimedia. The departments responsible for the enhancement of research and innovation will be pooled to achieve economies of scale. Finally, the two universities will collaborate with the American University Georgia Institute of Technology on technology transfer. The University of Limerick and Galway are distant of a hundred miles, employ 4,000 people and accommodate a total of 27,000 students.

This announcement is part of the government plan economic development. Universities and academic laboratories are clearly identified as important elements in ensuring the development of Irish territory by attracting foreign investment and generating the creation of innovative companies. The field of medical instrumentation employs 24,000 people in Ireland. The software is one of the most important sectors for exports to the Irish economy. Finally green technologies are new development priorities.

*Sources: March 2010*

- *Electronic Bulletin*, March 29, 2010

- *Limerick University* - <http://redirectix.bulletins-electroniques.com/w8Xu4>

- *National University of Ireland Galway* - <http://www.nuigalway.ie/ui-alliance/>

## **12.6 Ireland launches the "competence centers" for industrial research**

Ireland has just launched a new program to promote R&D companies. This project fits into the government plan of "knowledge society" that would reinvigorate the Irish economy. The program granted 56 million Euros financed by economic development agencies Enterprise Ireland and IDA, will create "centers of competence" in Irish universities. These centers bring together expertise around a common theme, corporate, SME or multinational, which would pool their R&D. The objective is to promote the marketing of innovative products from research.

These centers are run by companies who will pilot the work. The interest is to enable them to engage in projects of long-term research by pooling risks, benefit from intellectual property rights under conditions advantageous to be able to recruit scientists and technicians with high potential to form a network of

partners. The steering by the companies themselves is intended to focus centers on the commercial aspects, and ensure that research conducted does not lead to applications, new products or new services.

New centers of competence should be established, five are already established. Ultimately, the goal is to involve 180 companies and initiate at least 80 technology transfers (licensing of patents). More than 120 people should be employed in these centers half on research and half on the tasks of marketing.

The 9 centers are:

- Bio-energy and bio-refinery at the National University of Ireland Galway;
- Nanotechnologies applied to the Tyndall Institute at University College Cork;
- Composite Materials at University of Limerick;
- Innovation in Information Technology at the National University of Ireland Maynooth;
- Microelectronics Tyndall Institute at University College Cork;
- Industrial Productivity (draft);
- Energy efficiency (planned);
- E-learning (planned);
- Financial Services (draft).

*Sources: March 2010*

*- Electronic Bulletin, March 29, 2010*

*- Irish Times - <http://redirectix.bulletins-electroniques.com/RVDmo>*

## **12.7 Irish Minister O'Keeffe Announces €25m for "High-potential" Research Projects**

*Sources: May 2010*

*Full article available at:*

*<http://www.sfi.ie/news-events/press-releases/minister-okeeffe-announces-€25m-for-high-potential-research-projects/>*

## **12.8 Science Foundation Ireland: 33.5 million Euros for Research**

The Science Foundation Ireland (SFI) has announced the results of two of its programs for the year 2010.

Under the "Principal Investigator Program", 27 research projects were selected to receive a total of 25 million Euros over the next 5 years. Each project will receive funding ranging from 630,000 € to 1,600,000 €. These projects in the fields of energy, health, environmental protection, telecommunications and agriculture involve 139 researchers and should also create new jobs.

The distribution of selected projects was made in all Irish universities as follows: a project in Dublin Institute of Technology, 2 projects at the University of Limerick, 8 projects for the University College Dublin, 6 projects at Trinity College Dublin, 6 projects at the University College Cork (including 2 projects at Tyndall National Institute), and a project at NUI Maynooth. The objective of this program is to support excellence in research, foster collaborations between academic laboratories and major Irish industries, and to train highly qualified people.

Under the "Research Frontiers" program, 8.5 million Euros will be allocated to 47 cutting-edge projects to promote the creation of new jobs, new opportunities, and training courses for 105 researchers (mostly PhD). The selected projects are covering all fields of science -- mathematics, biochemistry, engineering, biology, computer science, geoscience, physics, astronomy, genetics, chemistry, neuroscience, materials, and medical treatment. This program also funds basic research. Projects selected in 2009 have resulted in numerous publications and led to the establishment of academic and industrial cooperation. The program contributes to the development of Ireland's competitiveness in science.

*Sources: June 2010*

*Electronic Bulletin, June 25, 2010*

## **12.9 Monitoring Ireland's Skills Supply - Trends in Education and Training Outputs 2010**

### *Numbers at School and College to Grow Significantly in the Coming Years*

The Expert Group on Future Skills Needs today published its annual report on the supply of skills to the Irish labor market. The report, "Monitoring Ireland's Skills Supply: Trends in Education and Training Outputs", highlights the increasing numbers of students entering and leaving the education and training system in Ireland. The report examines:

- The demographic profile of the school age population
- Junior and Leaving Cert trends
- Further education and training awards
- Higher education trends
- Where graduates go

Commenting on the report, Una Halligan, Chairperson of the Expert Group on Future Skills Needs said "For the first time in the Monitoring Ireland's Skills Supply series, we have taken a closer look at where graduates go from higher education. The key finding for third level graduates aged between 25 and 34 is that even in the current economic climate, 85% of them with an honors bachelor degree and above are at work. The overwhelming message here is that further education creates opportunities".

*Sources: July 20, 2010*

*Full article available at:*

<http://www.forfas.ie/newsevents/news/title.6528,en.php>

## **12.10 Science Foundation Ireland welcomes Government's Commitment To Scientific Research**

### *Revised capital investment program a clear signal of intent*

Science Foundation Ireland (SFI) has welcomed the announcement by An Taoiseach Brian Cowen T.D. of Infrastructure Investment Priorities 2010-2016, the Government's €39.43billion revised capital investment program.

Welcoming the six-year plan, Director General of SFI, Professor Frank Gannon, said "The Government's announcement unambiguously reaffirms the central role that research and development is playing in our economic rejuvenation, in fostering academic-enterprise collaboration on these shores, and in enhancing Ireland's efforts of becoming an international innovation hub.

Professor Gannon added: "The investment of €2.4billion for Science, Technology and Innovation programs will enable SFI and others to deliver on the sustained progress collectively achieved in partnership with Government, agencies, industry and the academic community over the past decade. The funding will assist in retaining and attracting world-class researchers and foreign direct investment, as well as developing Ireland's indigenous hi-tech sector. A capital injection of this magnitude represents perhaps the clearest signal to date - to the myriad of interested parties here and abroad - of Ireland's commitment to re-establishing competitiveness and growth and to attaining excellence, through targeted investment in scientific and engineering research."

*Sources: August/September 2010*

<http://www.sfi.ie/news-events/press-releases/science-foundation-ireland-welcomes-governments-commitment-to-scientific-research/>

*Capital Expenditure Review (pdf) available at:*

<http://www.finance.gov.ie/viewdoc.asp?DocID=6403>

## **13 Italy**

### **13.1 Multidomain Scientific Cooperation Between PACA\* and Campania (Italy)**

The Campania Workshop, held at the Città della Scienza in Naples last December 17 and 18, is a milestone in the development of interregional cooperation programs promoted by the Campania in Europe.



Launched in 2005-2006 by regional presidents Antonio Bassolino and Michel Vauzelle, the Campania-PACA partnership focuses on the Mediterranean area with the objective of preserving and enhancing the region through models of balanced and sustainable development.

Particular attention is paid to risks to the ecosystem, the topic of a series of meetings between research institutes in Marseilles and Naples (including the Zoological Station Anton Dohrn). On seismic and coastal areas, a partnership between the Regional Center of Competence AMRA in Campania and Pole Risks of the PACA region has been established.

This Workshop also represents an important opportunity for promoting the idea of creating a research network for the environment in the western Mediterranean which would gradually extend to the countries of the South Bank. The creation of this network will be extended in coming months, through meetings held in Barcelona and Valencia.

Although focused primarily on environmental issues, the partnership does not stop there. Cooperation between the Municipality of Taurasi and the University of French Wine in Suze-la-Rousse on a creative project at Taurasi of a University of Flavors, Fragrances and Knowledge of the Mediterranean. At the close of discussion on December 18, the French and Italians welcomed the increasingly important collaboration between the two regions and the creation of a real Marseilles-Naples axis.

*Sources: January 2010*

*- Electronic Bulletin, January 15, 2010*

*- Citta della Scienza web site: - <http://www.idis.cittadellascienza.it/>*

*\* French Region of Provence, Alps and Cote d'Azur*

### **13.2 Innovation in photovoltaics: solar panels in rolls (Italy)**

It is in Italy, more precisely in the Etna Valley, that has been developed solar panels of a new type, so fine that we can roll it like wallpaper! These new photovoltaic surfaces extremely fine, good even on plastic because not produced using a laser but with a cold process.

The project called "Plasia" (Design and realization of a plasma deposition of amorphous silicon on plastic substrates) is achieved with an investment of 1.9 million Euros, thanks to collaboration between the University of Catania and companies from the Etna Valley Advanced Technology Solutions, MI Welding Technology Meridionale Impianti, High Purity Technology Srl.

The great novelty of this technology is that machines operate at "low" temperature, about 80°C, while the usual techniques on the market today are based on a laser and operating at temperatures around 400°C. Therefore it is possible to use surfaces that blend with the traditional treatment, primarily plastic.

The first applications of the project are mainly photovoltaics. This new technology could replace traditional silicon wafers that are much more expensive and heavier.

*Sources: January 2010*

*- Electronic Bulletin, January 15, 2010*

*- Salvatore Raffa, President of the Meridionale Impianti and of the Etna Valley District*

### **13.3 Technology Policies - A new law on patent rights for researchers (Italy)**

The Italian Ministry Council has approved a revised legislative decree of the Code of Intellectual Property (*DECRETO 13 gennaio 2010, #33*). The decree provides that the inventions of university researchers are patentable only by their universities (or other public offices) during the first six months. Thereafter, if the university takes no action, the researcher is free to file a patent or to sell the idea. The researcher will be able to freely apply for patent abroad. The text also introduces legal protection for biotechnological inventions.

Former Minister of Economic Development, Claudio Scajola, said that "this text seeks to stimulate patenting and accelerate the industrial use of patents intensifying the process of innovation and helping to

initiate economic recovery.”

The corrections to the Code of Intellectual Property made by the decree must now go through the committees of the State Council and the Regions Conference (Conferenza unificata) and should be finally adopted by August 15.

*Sources: June 2010*

*Electronic Bulletin, May 27, 2010*

*Article published in the Sole 24 Ore: <http://redirectix.bulletins-electroniques.com/jjpEq>*

*Full text available at: <http://redirectix.bulletins-electroniques.com/Nfa7e>*

#### **13.4 L'Oréal Italy Awards for Women in Science**

This year, five research projects were awarded the prestigious prize of 1,500 Euros. The jury was chaired by the oncologist Umberto Veronesi and the winners, whose age ranges between 25 and 33 years were:

- [Cinzia Chiandetti](#) for "Physics in the Henhouse", a research project conducted in animal cognition with the Inter-Departmental Centre Mind / Brain (CIMEC) of the University of Trento. The aim of the study, conducted on chickens (*Gallus gallus*), is to understand whether the mental representation of objects and their interactions are part of the genetic background or not.

- [Valentina Domenici](#), for "Chemical-physical characterization of new contrast agents for magnetic resonance imaging Tesla 7" project conducted at the Department of Industrial Chemistry, University of Pisa. The young researcher, completing a postdoctoral fellowship at the University of North Carolina (USA) and earning a Marie Curie Fellowship at the Institute Jozef Stefan in Ljubljana, will focus on the identification of contrast agents that are specific to each target whereas today this technology is based on non-selective substances, reaching all parts of the body but requiring large concentrations.

- [Marina Faiella](#) for "Metallo-protein models: development of catalytically active system", a project with the Department of Chemistry Paolo Corradini of the University Federico II of Naples that will explore potential applications of new synthetic proteins in industrial, pharmaceuticals and diagnostics processes.

- [Lavinia Nardinocchi](#) for a project in Endocrinology and Molecular Medicine at the National Tumor Institute Regina Elena in Rome. It will study the effectiveness of combined radiotherapy / chemotherapy and zinc molecules in the treatment of glioblastoma, the most widespread brain tumor.

- [Maria Ludovica Saccà](#), European PhD at the University of Bologna, who studies the use of micro-organisms in bacterial or fungal decontamination strategies.

*Sources: July 2010*

*Electronic Bulletin, June 30, 2010*

*L'Oréal Italy - <http://www.loreal.it/>*

#### **13.5 Framework Agreement for Cooperation between the CNR and ICTP (Italy)**

The new CNR-ICTP Climate collaboration will develop collaborations on climate change and its impacts, the application of nanosciences to energy resources, and the conservation of cultural heritage.

The agreement aims to update and promote innovative processes and joint development of technological activities. Given the ICTP mission, special attention will be given to the transfer of technical-scientific knowledge towards developing countries in Central and Eastern Europe. As such, the ICTP will undertake actions to boost the interaction with the network of CNR Institutes, across the Italian territory, through its own programs.

The areas of common interest to both agencies are in the following fields: Physics of the Earth system, the ICTP has developed regional climate models now well known internationally, in Condensed Matter Physics, ICTP is already working with the CNR Istituto dei Materiali Officina to develop new computational

methods for the study of nanostructures. Finally, the ICTP provides the launch of collaboration with the CNR regarding the use of advanced equipment for the study of the preservation of cultural heritage.

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[1] CNR: Italian national Council for Research - ICTP: the Abdus Salam International Centre for Theoretical Physics in Trieste headquarters. It was created in 1964 by an eponymous Nobel Prize, from a tripartite agreement between the Italian government (headquarters agreement), UNESCO and AEIA. Its main mission is to strengthen research in Physics and Mathematics, by supporting excellence in developing countries.

*Sources: July 2010*

- *Electronic Bulletin, June 30, 2010*

- *ICTP - Abdus Salam International Centre for Theoretical Physics: <http://www.ictp.it>. President's Office: Ms. Anne Gatti, [gatti@ictp.it](mailto:gatti@ictp.it), Phone (+39) 040 2240 251.*

- *CNR - Pr. Luciano Maiani - [presidenza@cnr.it](mailto:presidenza@cnr.it) - Phone: 0649 933 200 - 0649 933 246*

- *<http://www.cnr.it/sitocnr/Englishversion/Englishversion.html>*

## 14 Latvia

### 14.1 The European University Association Recommends Consolidation of Latvian Universities

"The merger of all existing universities into a single structure would help Latvia to present its higher education system as a unified and centralized one," said Jean-Marc Rapp, President of the European University Association (EUA).

Discussions on the need to create a single university system in Latvia started in early fall 2009 when it became clear that funding for higher education would be cut by 31% or 11.4 million Lats (€16 million). This implies structural reforms to maintain the system. Marcis Auzins, Rector of the University of Latvia (the largest university in Latvia), has proposed creating a single university structure, anticipating the recommendation of the EUA.

This project, still in development, would significantly alter the normal structure. It also implies changes for policy makers, entrepreneurs, and French scientists working with universities in Latvia. A detailed electronic newsletter will be published on this subject as soon as the project is made public.

*Sources: January 2010*

*Electronic Bulletin, January 8, 2010*

### 14.2 European Master in Materials Science (Latvia)

The Erasmus Mundus Master in Materials Science [MaMaSELF1] has been selected by the European Commission as a category under Erasmus Mundus program. In this context, the Master MaMaSELF has evolved to provide a Master's degree in two years; grants for European Students; and an additional partnership with IIT Madras in India.

The European Masters Program in Materials Science aims to offer a European degree directly linked with the Great Instruments. It is the result of a collaboration among four European universities under the European Erasmus Mundus program. The Master's degree will be awarded in two of the four partner universities: Rennes 1 (France), Turin (Italy) and TU and LMU MUNICH (Germany) -- each student will obtain a Master's degree in two of the four universities.

Below is general information about the master MaMaSELF.

Interested students should be aware of a €22,000 scholarship for non-European students and €12,000 for European students to support their study.

#### **Admission:**

The admission requirement is a standard license or 180 ECTS in Materials Science or a related field (physics, chemistry, geosciences), and an appropriate fluency in scientific English (TOEFL 210/550, IELTS 6.5 or equivalent).

The deadline for submitting applications is January 19, 2010 for non-European students, or May 21, 2010 for European students.

#### **Grants:**

Each year the consortium will select a group of non-European and European students to receive a scholarship (€22,000/year for non-European and €12,000/year for Europeans). A scholarship is also open to non-European students who have already spent time in Europe. European students will benefit from the opportunity to spend a semester at a MaMaSELF partner in Japan (Kyoto University and Yamanashi) and Switzerland (PSI, ETH), or India (IIT Madras).

#### **Schedule:**

Each student will spend one year at a university, then change for the second year. During this second year, the second semester is devoted to the Master's thesis and can give rise to a move to another university consortium, a partner university, or a continuation with the Great Instruments.

MaMaSELF students receive two diplomas, one from each of the two universities attended.

#### **Sources: January 2010**

- *Electronic Bulletin*, January 8, 2010

- [1] *Master in Material Science MaMaSELF* : <http://mamaself.univ-rennes1.fr>

### **14.3 2010 Grants Awarded "For Women in Science" (Latvia)**

These grants are awarded by a panel of scientists chaired by the President of the Senate of the Academy of Sciences, Academician Janis Stradins. The national component of the international program "For Women in Science" was created in 2005 as part of the international L'Oréal-UNESCO "For Women in Science".

L'OREAL-UNESCO Latvia grants aim to promote scientific research in Latvia. In the last 6 years, 18 female researchers have benefited from this award. The recipients of 4,000 Lats (5,720 Euros) each in 2010 are:

**Una Riekstins** - Doctor of Biology, Professor in the Faculty of Medicine, University of Latvia and principal investigator in the Laboratory Bio-analytical Methods in the Faculty of Biology, will receive a grant to research the impact of human skin cell strains to restore nerve cells. The purpose of this research is to study whether stem cells from skin tissue can help damaged nervous tissue recover. The results will contribute to the creation of new therapies for nerve regeneration.

**Inese Cakstina** - Master in Natural Science, a scientific assistant at the Laboratory of Bio-catalytic Methods in the Faculty of Biology, University of Latvia, will receive a grant to study "The *in vitro* impact of vitamin A on molecular mechanisms in human heart cells". The research results will provide insight into the regulatory role of vitamin A in human cells that will form the heart and blood vessels.

**Elina Pajuste** - Master in Natural Sciences, research assistant of the Solid Chemistry Radiation Laboratory, Institute of Chemical Physics, at the University of Latvia will receive a grant to study "The properties of tritium collected in fusion reactions". The objective of the research is to evaluate the materials for safe and efficient operation of a fusion reactor.

#### **Sources: August/September 2010**

*Electronic Bulletin*, August 20, 2010

Web site: <http://www.loreal.fr/fr/fr/for-women-in-science.aspx> - Latvian contact - Email: [estere@latnet.lv](mailto:estere@latnet.lv)

## 15 Luxembourg

### 15.1 Second Joint Call for Project Proposals "International Collaboration in Chemistry" with NSF (Luxembourg)

The National Research Fund (FNR) is pleased to inform its plans to issue in September 2010 the second joint call for project proposals in the 'International Collaboration in Chemistry' between US Investigators and their Counterparts Abroad (ICC) with the U.S. National Science Foundation (NSF).

The NSF and the FNR, which are counterpart national funding organizations in the U.S. and Luxembourg respectively, seek to enhance opportunities for collaborative activities in chemistry between U.S. and Luxembourg investigators. The NSF and the FNR will accept new collaborative research proposals between chemists from the U.S. and Luxembourg who work in academic/public research institutions. The NSF and the FNR will utilize a common set of reviewers and make joint funding decisions.

The preliminary closing date of the mandatory pre-proposals will be 5 November 2010 (will be confirmed when the call is launched).

***Call information by the FNR will be made available early September 2010 on this website.***

*Contact at the FNR: Christiane Kaell*

*Thursday 05 August 2010*

*Sources: August/September 2010*

## 16 The Netherlands

### 16.1 Subsidy for international workshops – NWO<sup>1</sup> May 3, 2010 (The Netherlands)

Researchers in the Social and Behavioral Sciences can apply for a subsidy for the organization of a workshop on a scientific subject at the Lorentz Center. NWO-MaGW has become a partner of the Lorentz Center in Leiden.

*Sources: May 2010*

*Full article available at:*

*[http://www.nwo.nl/nwohome.nsf/pages/NWOP\\_84YJXD\\_Eng?open&nav=NWOP\\_5V2J7T](http://www.nwo.nl/nwohome.nsf/pages/NWOP_84YJXD_Eng?open&nav=NWOP_5V2J7T)*

*Further information can be obtained from the [website of the Lorentz Center](#) or by contacting Mieke Schutte ([schutte@lorentzcenter.nl](mailto:schutte@lorentzcenter.nl), +31 71 527 5405).*

### 16.2 Talking seriously with children is good for their language proficiency – NWO<sup>2</sup> April 20, 2010 (The Netherlands)

How adults approach children aged 3 to 6 years during conversations has a major influence on their language acquisition. Those who address children as fully-fledged conversation partners lay an early basis for the development of 'academic language', says Dutch researcher Lotte Henrichs.

*Sources: May 2010*

*Full article available at: [http://www.nwo.nl/nwohome.nsf/pages/NWOP\\_84PGTV\\_Eng](http://www.nwo.nl/nwohome.nsf/pages/NWOP_84PGTV_Eng)*

*For further information please contact:*

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#### <sup>1</sup> About NWO

The Netherlands Organisation for Scientific Research (NWO) is the principal Dutch science funding body and its mission is to facilitate excellent scientific research in the Netherlands by means of national competition. Each year NWO spends more than 700 million euro on grants for top researchers, on innovative instruments and equipment, and on institutes where top research is performed. NWO funds the research of more than 5300 talented researchers at universities and institutes. Independent experts select proposals by means of a peer review system. NWO facilitates the transfer of knowledge to society.

Lotte Henrichs: [l.henrichs@uva.nl](mailto:l.henrichs@uva.nl)  
<http://home.medewerker.uva.nl/l.henrichs>

### **16.3 NWO sends young researchers into the big wide world – NWO<sup>2</sup> April 7, 2010 (The Netherlands)**

33 young researchers set to gain experience abroad with the help of Rubicon  
The Netherlands Organization for Scientific Research (NWO) has awarded Rubicon grants to 33 young and promising researchers. Dutch researchers who have recently gained a doctorate can use the grant to gain research experience abroad. Foreign researchers can use it to undertake research in the Netherlands.

Sources: May 2010

Full article available at:

[http://www.nwo.nl/nwohome.nsf/pages/NWOP\\_84ACFG\\_Eng?open&nav=NWOP\\_5V2J7T](http://www.nwo.nl/nwohome.nsf/pages/NWOP_84ACFG_Eng?open&nav=NWOP_5V2J7T)

For further information please contact:

NWO, Information and Communication Department - phone: +31 (0)70 344 07 13

[voorlichting@nwo.nl](mailto:voorlichting@nwo.nl)

[www.nwo.nl/rubicon](http://www.nwo.nl/rubicon)

### **16.4 Tracking down genes for intelligence – NWO<sup>2</sup> March 15, 2010 (The Netherlands)**

G proteins influence cognitive skills: Recalcitrant G proteins might be the cause of lower intelligence, schizophrenia and autism. These proteins are located on the inside of each cell membrane and can pass on messages from the outside to the inside of a cell. Almost every time your brain wants to pass on a message, this switch is in the way. Vidi winner Danielle Posthuma discovered how big a role G switches play.

Sources: May 2010

Full article available at:

[http://www.nwo.nl/nwohome.nsf/pages/NWOP\\_83KCW5\\_Eng?open&nav=NWOP\\_5V2J7T](http://www.nwo.nl/nwohome.nsf/pages/NWOP_83KCW5_Eng?open&nav=NWOP_5V2J7T)

For further information please contact:

Danielle Posthuma (VU University Amsterdam & VU Medical Center) - phone: +31 (0) 20 598 28 23

[danielle.posthuma@cncr.vu.nl](mailto:danielle.posthuma@cncr.vu.nl)

### **16.5 Software solves murder – NWO<sup>2</sup> March 12, 2010 (The Netherlands)**

New software can prevent mistakes in detective work. At present, the police still make unnecessary mistakes when collecting and analyzing evidence, which sometimes results in miscarriages of justice. Dutch researcher Susan van den Braak has developed a computer program that can help to prevent such blunders.

Sources: May 2010

Full article available at:

[http://www.nwo.nl/nwohome.nsf/pages/NWOP\\_83GDKQ\\_Eng?open&nav=NWOP\\_5V2J7T](http://www.nwo.nl/nwohome.nsf/pages/NWOP_83GDKQ_Eng?open&nav=NWOP_5V2J7T)

For further information please contact:

Susan van den Braak (Utrecht University) - phone: +31 (0)6 45 19 25 34 [susan.vandenbraak@gmail.com](mailto:susan.vandenbraak@gmail.com)

The doctoral thesis was defended on 15 March 2010 - Supervisors: Prof. J.J.Ch. Meyer and Prof. H. Prakken

### **16.6 Climate change affects subterranean ecosystems – NWO<sup>2</sup> March 10, 2010 (The Netherlands)**

Changes above the ground, such as a higher concentration of carbon dioxide and increased temperatures have major consequences for the contact zone between plant roots and the soil. This became apparent during the recently completed research program Biodiversity in relation to Global Change (BIGC) from NWO. The UN year of biodiversity should therefore devote attention to subterranean



ecosystems as well. This year NWO is launching a new research program in the area of biodiversity and ecology.

*Sources: May 2010*

*Full article available at:*

[http://www.nwo.nl/nwohome.nsf/pages/NWOP\\_83EDM7\\_Eng](http://www.nwo.nl/nwohome.nsf/pages/NWOP_83EDM7_Eng)

*For further information:*

*Mirjam van het Groenewoud-Groot, program leader BIGC [m.vanhetgroenewoud@nwo.nl](mailto:m.vanhetgroenewoud@nwo.nl) - phone: +31 70 344 06 26*

### **16.7 NWO invests 10 million euro in large research facilities – NWO<sup>2</sup> March 3, 2010 (The Netherlands)**

The Netherlands Organization for Scientific Research (NWO) has awarded 31 grants in the Investment Subsidy NWO Medium program for the acquisition of equipment, the setting up of data collections and the production of software and bibliographies. The total investment amounts to 10 million euro.

*Sources: May 2010*

*Full article available at:*

[http://www.nwo.nl/nwohome.nsf/pages/NWOP\\_837CUQ\\_Eng?open&nav=NWOP\\_5V2J7T](http://www.nwo.nl/nwohome.nsf/pages/NWOP_837CUQ_Eng?open&nav=NWOP_5V2J7T)

*For further information please contact:*

*NWO, Information and Communication Department - phone: +31 70 344 07 13*

*[voorlichting@nwo.nl](mailto:voorlichting@nwo.nl) or [www.nwo.nl/subsidiewijzer.nsf/pages/NWOP\\_5K4ENS](http://www.nwo.nl/subsidiewijzer.nsf/pages/NWOP_5K4ENS)*

### **16.8 First PRACE Petaflop/s System Ready for European Researchers: Early Access Call Open (NOW – The Netherlands)**

PRACE (the Partnership for Advanced Computing in Europe) allows researchers from across Europe to apply for time on the PRACE resources via a peer review process. This call marks the first opportunity for researchers to apply for PRACE resources. It is an early access call inviting applications for the first HPC system available to researchers through PRACE: the IBM BlueGene/P – JUGENE – hosted by the Gauss-Centre member site in Jülich, Germany.

JUGENE offers computation power of one Petaflop/s and is one of the fastest computers in the world (number 4 on the latest Top 500 list of world's most powerful computers). The term Petaflop/s means computation efficiency of  $10^{15}$  floating point operations per second.

The deadline for submission of proposals is June 10th at 16.00 CEST. All proposals must be submitted via the PRACE website at:

<http://www.prace-project.eu/hpc-access>

The Early access call is intended for large-scale projects that have reached a high level of scientific and technical maturity, and could benefit from a relatively small window of access (4 months) to achieve significant scientific results: results offered should lead to the anticipated publication of results in one or more high-quality journals. The projects must demonstrate scientific excellence and should cover topics of major relevance for European research and also demonstrate the need for Tier-0 resources.

Besides requesting computer time through project access, applicants may also request support from software experts for code scaling improvement and optimization through preparatory access. Preparatory access must be followed by a project access proposal that it is linked to it.

All proposals will undergo PRACE technical and scientific assessment. The assessment procedure will adhere to the PRACE principles of peer review. For this call only proposals from academia are eligible and project leader must be homed in a European Union country or a PRACE initiative country. The JUGENE at GCS at Jülich also has further restrictions due to US export rules. All applicants should expect to be notified of the outcome by the end of July.

The first call for PRACE access with the standard allocation time of 1 year will open in June 2010. A continuous call for applications for preparatory access will be also announced in June 2010.

*Sources: May 2010*

*More information and application form: [www.prace-project.eu/hpc-access](http://www.prace-project.eu/hpc-access),*

*see also a related document on: [www.prace-project.eu/hpc-access/early\\_access\\_call.doc](http://www.prace-project.eu/hpc-access/early_access_call.doc)*

*NOW Web site, 19 May 2010*

*[http://www.nwo.nl/nwohome.nsf/pages/NWOP\\_85LC3S\\_Eng?open&nav=NWOP\\_5V2J7T](http://www.nwo.nl/nwohome.nsf/pages/NWOP_85LC3S_Eng?open&nav=NWOP_5V2J7T)*

### **16.9 Funding available for Open Access publications (The Netherlands)**

The NWO fund for Open Access publications contributes to the costs involved in publishing in open access journals. These publications have the potential to enhance the impact of research results of WOTRO funded research and improve collaboration. Scholars from developing countries experience great difficulties to stay well informed, because in many cases they do not have access to publications. Moreover, publications can have greater impact when they are freely available to policy makers or the private sector.

Interested? Don't wait too long, because this call will be open until the available funds are exhausted.

*Sources: June 2010*

*NWO Web site, June 9, 2010*

### **16.10 Dr. Jonne Rodenburg receives CGIAR award (The Netherlands)**

The CGIAR Science Award for Promising Young Scientist was given to former WOTRO researcher Dr. Jonne Rodenburg, weed specialist at the Africa Rice Center. The award recognized Dr. Rodenburg for his commitment to helping resource-poor rice farmers in Africa, especially women, through the development of integrated approaches to managing parasitic weeds, the major source of yield loss in rice in Africa. Dr Rodenburg was particularly appreciated for his high-quality research, excellent record in publications, close involvement in building capacity of national scientists and successful efforts in mobilizing resources for research projects.

*Sources: June 2010*

*NWO Web Site, June 4, 2010*

### **16.11 Launch of the Sustainable Earth newsletter (The Netherlands)**

The Sustainable Earth newsletter is directed at all who are involved in programs in the Sustainable Earth field.

This edition includes: Chinese–Dutch cooperation program going well - Three new policy-oriented sea and coastal research projects - Development costs of sustainable energy identified - Trees provide cooling during heat waves.

*Sources: October 2010*

*Subscription is available at the attached link:*

*[http://www.nwo.nl/nwohome.nsf/pages/NWOP\\_89WES4\\_Eng?open&nav=NWOP\\_5V2J7T](http://www.nwo.nl/nwohome.nsf/pages/NWOP_89WES4_Eng?open&nav=NWOP_5V2J7T)*

### **16.12 Over 40 million for young researchers (The Netherlands)**

*Netherlands Awards Prestigious Post-Docs*

The Netherlands Organization for Scientific Research (NWO) recently awarded 161 young postdoctoral researchers a Veni grant. Each researcher will receive 250,000 Euro (~\$330,000). This grant will allow these young talents to perform research for a period of three years. The Veni grant from NWO's Innovational Research Incentives Scheme is one of the most prestigious grants for young researchers and is considered an important step in a scientific career.

Although this is the largest number of Veni researchers funded in a single round, the percentage of successful applicants was only 16%, the lowest awarding rate since the program's inception. The main reason is the increased number of applications, which increased from 809 last year to 982 applications in

the current round. Despite the increased budget for the Innovational Research Incentives Scheme, NWO had to reject many high quality applicants. Among the young talent in this round of Veni grants are 67 women.

Selected through an international review process, Veni researchers represent early career researchers who have already demonstrated a remarkable talent for scientific research. With this grant, they can develop their ideas further for three years.

The Veni grant is one of three grant types under the Innovational Research Incentives Scheme ([www.nwo.nl/vernieuwingsimpuls](http://www.nwo.nl/vernieuwingsimpuls)). The other two grants are the **Vidi** grant (for experienced postdocs) and the **Vici** grant (for very experienced researchers). The Innovational Incentives scheme was set up in cooperation with the Ministry of Education, Culture and Science, the Royal Netherlands Academy of Arts and Sciences and the universities.

An [alphabetical list of awarded projects](#) is available with the working title of the research project.

*Sources: November 2010*

*NWO Web Site, November 2, 2010*

### **16.13 70 million for innovative science (The Netherlands)**

NWO awards Vidi grants to 88 outstanding researchers: The Netherlands Organization for Scientific Research (NWO) has awarded a Vidi grant to 88 researchers. Each scientist will receive a maximum of 800,000 euro to develop his or her own line of research and to build up a research group. Altogether NWO will divide more than 70 million euro among the laureates.

*Sources: December 2010*

*Full article available at:*

[http://www.nwo.nl/nwohome.nsf/pages/NWOP\\_8BCDHD\\_Eng?open&nav=NWOP\\_5V2J7T](http://www.nwo.nl/nwohome.nsf/pages/NWOP_8BCDHD_Eng?open&nav=NWOP_5V2J7T)

*December 21, 2010*

### **16.14 NWO chairman appointed vice president of EUROHORCs (The Netherlands)**

NWO chairman Jos Engelen is the new vice president of EUROHORCs, the European organization of research councils and research institutes. The European Heads of Research Councils advise the European Commission on European research policy. The organization also wishes to strengthen the role of national research-funding and research-performing organizations by providing a discussion platform and developing joint initiatives.

*Sources: December 2010*

*Full article available at:*

[http://www.nwo.nl/nwohome.nsf/pages/NWOP\\_8B3E97\\_Eng?open&nav=NWOP\\_5V2J7T](http://www.nwo.nl/nwohome.nsf/pages/NWOP_8B3E97_Eng?open&nav=NWOP_5V2J7T)

*December 20, 2010*

## **17 Norway**

### **17.1 Norwegian Research Council's 2011 Budget Priorities**

The Norwegian Research Council submitted a draft of the 2011 budget with an increase of 1.77 billion Crowns (about 120 million Euros) on a total budget of 8.5 billion Norwegian Crowns (about 1 billion Euros).

Four major priorities that will benefit from an additional 1 billion Crowns (about 120 million Euros) are as follows:

- 480 million Norwegian crowns (about 60 million Euros) for the fields of climate and energy,
- 340 million Norwegian crowns (about 46 million Euros) for the development of enterprise research,
- 150 million Crowns (18 million Euros) to support basic research,
- 250 million Crowns (30 million) for strengthening the fund for equipment and research infrastructure.

Other priorities, such as internationalization and funds for research institutions, benefit from an increase of 700 million Crowns (about 85 million Euros).

*Sources: February 2010*

*Electronic Bulletin, February 1, 2010*

### **17.2 More Women in High Academic Positions in Norway**

The Norwegian government has decided to accelerate the percentage of women in senior academic positions in mathematics, natural sciences, and technology. Tora Asland, Minister of Research and Higher Education, has stated that the gender balance within the academies is evolving positively, but too slowly. Women are particularly underrepresented in the fields of mathematics, natural sciences, and technology.

Last fall, 10 million Crowns (about 1.2 million Euros) were allocated to universities and colleges employing women in positions of professor and lecturer. These funds are redistributed among the institutions with academic units and graduate schools in pre-determined key areas. This funding is seen by the Norwegian government as a good alternative for the assignment of women to senior academic posts.

By comparison, women on the French corporate boards represent 8% vs. 44% in Norway. Norway is far ahead of its European neighbors in gender parity.

*Sources: February 2010*

*Electronic Bulletin, February 1, 2010*

### **17.3 University of Bergen has 3 winners in European Research Council Competition (Norway)**

Under the EU 7th Framework Program, the European Research Council (ERC) supports projects awarded on the sole criterion of research excellence in three categories: life sciences, physical sciences and engineering, and social sciences and humanities. The maximum funding per project is 3.5 million Euros for a maximum of five years. The calls for proposals are published annually in the fall, with a deadline for submission in the spring of the following year.

This year, 236 top researchers representing 26 nationalities located in universities or other research institutions in 18 countries were the winners. Three scientists from the University of Bergen were selected for their work.

Christopher Henshilwood and Kenneth Hugdahl won in the social sciences for their archaeological work on human origins in Africa. Henshilwood's project traces the evolution of symbolically mediated behavior in variable environments in Europe and South Africa. Hugdahl's research is in biological psychology and focuses on the brain and its relationship to language through neuropsychology. He received his award for research on "the voice" of cognition in brain systems.

Tron Thingstad, working in life sciences, specifically in marine microbiology, was funded for his work in microbial network organization. He has since participated in Euro Ocean, European Network of Excellence for ecosystem analysis.

*Sources: February 2010*

*Electronic Bulletin, February 1, 2010*

- European Research Council:

<http://erc.europa.eu/>

[http://erc.europa.eu/pdf/Press\\_release\\_AdG-2\\_results.pdf](http://erc.europa.eu/pdf/Press_release_AdG-2_results.pdf)

[http://erc.europa.eu/pdf/List\\_AdG09\\_LS.pdf](http://erc.europa.eu/pdf/List_AdG09_LS.pdf)

- Tron Thingstad: <http://www.uib.no/persons/Frede.Thingstad#profil>

- Christopher Henshilwood: <http://www.uib.no/persons/Christopher.Henshilwood#forskningsfelt>

- Kenneth Hugdahl: <http://www.uib.no/med/biomed/sbmb/nevro/members/hugdahl/>

#### 17.4 Thomas Ebbesen Becomes Second Norwegian at the Academy of Sciences

Thomas Ebbesen, born in Norway in 1954, is a physical chemist well-known for his research in the field of nanoscience, where he has made important discoveries.

Having begun his studies at the Oberlin University (USA), he obtained his PhD at the University Pierre and Marie Curie (France). His first job was at Notre Dame Radiation Laboratory (USA), where he continued the work on physical photochemistry that he started with his thesis. He joined the laboratory of NEC in Japan in 1988, where his research moved to the study of carbon nanomaterials (C60, nanotubes and graphene). In 1999 he joined the Institute for Science and Supramolecular Engineering (ISIS) in Strasbourg, where he is the current director. He is also Director of International Research at the Frontiers of Chemistry.

Throughout his career, Ebbesen has received numerous awards, including the France Telecom Academy of Sciences Prize in 2005, the "Quantum Electronics and Optics" Prize from the European Physical Society in 2009. Already a member of the Norwegian Academy of Science and Letters, he is one of 18 new foreign associates of the French Academy of Sciences elected on December 8, 2009. He joins his countryman Nils Christian Stenseth elected in 2005.

*Sources: February 2010*

- *Electronic Bulletin, February 1, 2010*

- *Nanostructure Laboratory from Strasbourg: [http://www-isis.u-strasbg.fr/nano/start-http://en.wikipedia.org/wiki/Thomas\\_Ebbesen](http://www-isis.u-strasbg.fr/nano/start-http://en.wikipedia.org/wiki/Thomas_Ebbesen)*

- *[http://www.academie-sciences.fr/membres/s/stenseth\\_nils\\_bio.htm](http://www.academie-sciences.fr/membres/s/stenseth_nils_bio.htm)*

#### 17.5 AURORA Program 2011: Call for Applications for the Hubert Curien Franco-Norwegian Partnership (PHC)

Aurora is the Hubert Curien Franco-Norwegian Partnership (PHC). It has been implemented in Norway through the International Scholarship Section of Norges Forskningsraad (NFR) - Norwegian Council of Research, and in France by the Ministries of Foreign and European Affairs (MAEE) and the Higher Education and Research (MESR). Management is performed by EGIDE.

The objective of this program is to develop scientific and technological exchanges of excellence between research laboratories of both countries, promoting further cooperation. All scientific fields, including humanities and social sciences, for which researchers are encouraged to submit projects, are eligible for this program.

Applications are to be filed before June 2, 2010.

- *Online submission at:*

*<http://www.egide.asso.fr/jahia/Jahia/site/egide/lang/fr/dosphc>*

*Sources: March 2010*

- *Electronic Bulletin, March 9, 2010*

- *Additional information can be found at:*

*<http://www.egide.asso.fr/jahia/Jahia/site/egide/lang/fr/aurora>*

#### 17.6 New face in Washington, DC (Norway)

This autumn, Dr Lars Espen Aukrust will assume the post of Counselor for Science attached to the Royal Norwegian Embassy in Washington D.C. He will succeed Dr Berit Johnne, who will be leaving the position after four eventful and fruitful years.

*Sources: June 2010*

*The Research Council of Norway web site, June 24, 2010*

*Full article available at:*

*[http://www.forskningradet.no/en/Newsarticle/New\\_face\\_in\\_Washington/1253960170138](http://www.forskningradet.no/en/Newsarticle/New_face_in_Washington/1253960170138)*

#### 17.7 New Head at the Research Council's Liaison Office (Norway)

The Research Council's Liaison Office for EU RTD in Brussels works to give the Norwegian research and innovation community a better basis for participating in EU research activities. A new head of office, Tobias Bade Strøm, will be starting in the late summer.

*Sources: June 2010*

*The Research Council of Norway web site, June 24, 2010*

*Full article available at:*

[http://www.forskningsradet.no/en/Newsarticle/New\\_head\\_at\\_Research\\_Councils\\_Liaison\\_Office\\_in\\_Brussels/1253960157298](http://www.forskningsradet.no/en/Newsarticle/New_head_at_Research_Councils_Liaison_Office_in_Brussels/1253960157298)

## **17.8 Survey from the European Commission: Norwegians believe in research**

Norwegians rank tops in Europe when it comes to their faith in science and technology as means to a healthier, easier and more comfortable life.



While there is increasing pessimism in the rest of Europe about the potential contribution of research to our daily lives, Norwegians are more optimistic than ever, with an increase of two percentage points from 2005. The 27 EU countries experienced an average decline of 13 percentage points during the same period.

### **Better life and health**

As many as 75% of the Norwegian respondents answered yes to the question of whether they believe that science and technology

will lead to a healthier, easier and more comfortable life. Only people from the UK, Malta and Iceland have more faith in what science and technology can achieve.

The results are taken from a broadly based survey conducted by the market research group TNS on assignment for the European Commission. The survey is a follow-up of corresponding surveys carried out in 2001 and 2005.

### **Optimistic about the future**

(Photo: Shutterstock) In the Nordic countries and the Baltic States, people are very confident that science will provide more opportunities for future generations than we have today. In Norway, as many as 86% of the population share this view.



Norwegians are also very willing to invest in scientific research that does not bring any immediate benefits to society. With a score of 87%, the Norwegian survey respondents stand out as being the most positive in Europe to government funding of basic research the effects of which are uncertain in the short term.

### **Far more benefits than drawbacks**

The survey also registered how Europeans view the negative aspects of science and technology. When asked whether the benefits of research are greater than any of the potentially harmful effects one can think of, Norwegians also take a very positive view. With 65% of the respondents answering in the affirmative, Norway tops the list.

The faith in research and researchers is also evident from the fact that 73% of the Norwegian respondents believe that we may miss out on technological progress if we focus too much on potential risks that are not yet fully understood.



### **Positive starting point**

Arvid Hallén Director General Arvid Hallén of the Norwegian Research Council finds the results of the survey extremely interesting. "It comes as a bit of a surprise that we clearly come out tops compared with other European countries. But first and foremost, the results show that the Norwegian population thinks along the same lines as we do," he says.

"The great interest shown by the population should serve as a good argument in favour of an ambitious research policy in this country," says Mr Hallén, who wants research and development to be more of a national priority in the time ahead, with more funding of both basic and applied research.

*Sources: August/September 2010*



*The Research Council for Norway web site*

*Article written by: Tore Espedal/Else Lie. Translation: Allegro Språktjenester*

*Published: 16.08.2010*

[http://www.forskningsradet.no/en/Newsarticle/Norwegians\\_believe\\_in\\_research/1253961398434](http://www.forskningsradet.no/en/Newsarticle/Norwegians_believe_in_research/1253961398434)

### **17.9 Research Council to review use of anonymous referees (Norway)**

In response to the implementation of the recently amended national Freedom of Information Act, the Research Council will review its practice of keeping the identities of referees who assess grant proposals confidential.

*Sources: August/September 2010*

*Full article is available at:*

[http://www.forskningsradet.no/en/Newsarticle/Research\\_Council\\_to\\_review\\_use\\_of\\_anonymous\\_referees/1253961511808](http://www.forskningsradet.no/en/Newsarticle/Research_Council_to_review_use_of_anonymous_referees/1253961511808)

### **17.10 2011 Budget: Higher Education and Research (Norway)**

In 2011, the budget for education and research managed by the Ministry of Education and Research increases with a total of 4.6 billion Crowns (490 million Euros). Tora Aasland, Minister of Research and Higher Education, and Kristin Halvorsen, Minister of Education, are pleased to see that "the government, despite a tight budget, chose to give priority to the education sector".

Very clear priorities were given: to broaden and improve the quality of educational institutions and to increase the number of young people in higher education. Concerning higher education, priority is given to increasing capacity in institutions of higher education. The proposal is to create 2,200 new places in universities and colleges by fall 2011. By 2015, the government will have funded an additional 18,000 new places.

#### *Some key figures for Higher Education:*

- Teacher training is revised upwards with an increase of 114 million Norwegian Crowns by 2014.
- All current plans for construction and renovation of structures are also included in this budget proposal. More university housing will be built with approximately 1,000 new university rooms by 2011.
- Emphasis is also focused on collaborative projects in the sectors of higher education. On the 2011 budget, an additional 19 million Norwegian Crowns (2.3 million Euros) will be awarded to the joint administrative structures
- An additional 14 million Norwegian Crowns will be allocated for grants and loans for students with disabilities.

The Research budget is overall 24.3 billion Norwegian Crowns (3 billion Euros) which corresponds to a nominal increase of 550 million Norwegian Crowns (68 million Euros) compared to 2010. The proposal is to inject 3 billion Norwegian Crowns (360 million Euros) in capital funds for research and innovation.

#### *Some key figures for Research:*

- Increase of 60 million Norwegian Crowns (7.4 million Euros) for basic research (through the Norwegian Research Council).
- Increase of 3 billion Norwegian Crowns (370 million Euros) of capital funds for research and innovation.
- 280 million Norwegian Crowns (35 million Euros) for research infrastructure.
- A big push is given to research in the education sector with the creation of a center of expertise for education in January 2011.
- An additional 45 million Norwegian Crowns (5.5 million Euros) for polar research.
- 10 million Norwegian Crowns (1.2 million Euros) will finance the construction of a new weather radar in Finnmark (northern Norway).

However, the overall budget (public funds) allocated to the Norwegian research (i.e. the budget of the Norwegian Research Council, the institutes and universities and other organizations that allocate funds for research) is less than in 2010, taking into account inflation. The Norwegian Research Council receives

its allocations from 16 different ministries. Arvid Hallén, Director General of the Norwegian Research Council, comments the decline: "When the government decides not to invest enough in research as shown in the 2010 budget proposal, it means failure of opportunities for Norway".

*Sources: October 2010*

- *Electronic Bulletin, October 20, 2010*

- *Budget:*

<http://www.regjeringen.no/en/dep/kd/press-contacts/Press-releases/2010/prioritising-knowledge-and-education-.html?id=619584>

<http://www.statsbudsjettet.dep.no/Statsbudsjettet-2011/English/>

- *Research Council of Norway:*

[http://www.forskningsradet.no/en/Newsarticle/Boost\\_for\\_basic\\_research/1253962368403](http://www.forskningsradet.no/en/Newsarticle/Boost_for_basic_research/1253962368403)

[http://www.forskningsradet.no/en/Newsarticle/Research\\_allocated\\_less\\_than\\_expected/1253962331885?WT.ac=forside\\_nyhet](http://www.forskningsradet.no/en/Newsarticle/Research_allocated_less_than_expected/1253962331885?WT.ac=forside_nyhet)

### **17.11 Scientific and Academic Cooperation Between Norway and China**

Norway has increased its cooperation with China in science and academia since 2007. In 2004-2005, a report by the Norwegian parliament already stressed the importance of strengthening the internationalization of Norwegian research and in particular the bilateral cooperation between Norway and China: "*Bilateral cooperation will be strengthened, with special emphasis with research collaboration with [...] China*". This collaborative approach has resulted in the November 2008 signing of a cooperation agreement in science and technology by the Norwegian Minister of Research and Higher Education and the Minister of Science and Technology of China. The agreement, similar to the one signed between France and Norway three months ago, promotes bilateral cooperation between Norway and China in science and establishes the creation of a joint committee to assist the development of bilateral cooperation.

More recently this year, Norway took the opportunity of the Shanghai World Fair to further strengthen its ties with China and improve the visibility of Norwegian research. Numerous conferences involving Norwegian and Chinese researchers and officials from both countries, including the Prime Minister of Norway, the Prince of Norway and several ministers and secretaries of state who made the trip, took place in the Norwegian exhibit pavilion. The Pavilion, which hosted more than three million visitors and various conferences on topics dear to Norway and China such as renewable energy and carbon capture and sequestration, environment, climate and polar research (polar and Arctic research are of great interest to China, which has installed a polar base on the Norwegian archipelago of Svalbard in 2004), as well as the Nordic welfare model.

These themes are central to the CHINOR program implemented in 2009 by the Norwegian Research Council, to consolidate and expand bilateral research. The first phase of the CHINOR program, which covers the period 2009-2017, allocates a sum of about 2.4 million Euros per year. It covers four main areas which are all key areas for research in China—research on climate, environmental research, research on new technologies in the field of energy and climate, and research on "social policy". Since then, scientific collaboration is increasing more and more and for the first time in June 2010, the Norwegian Research Council and the Chinese Academy of Sciences launched a joint call for research projects. In addition, between 2005 and 2009 more than 600 scientific articles have been co-signed by Chinese and Norwegian scientists: ten times more than a decade ago. In terms of industrial cooperation, large Norwegian companies have signed agreements with Chinese firms but there are still no Norwegian research and development firms in China.

China, with over 240 million children of school age, is of interest to Norwegian universities wishing to increase cooperative agreements. China, for its part, finds a diversification of research areas. In late 2008, a Memorandum of Understanding was signed between the Ministry of Education of China and the Ministry of Education and Research of Norway to promote academic cooperation and mutual recognition of diplomas awarded by the two countries. Universities in Beijing, Nanjing, Tsinghai, Jiao Tong, and Fudan have such agreements with the University of Oslo and the University of Science and Technology in

Norway (NTNU in Trondheim). NTNU recently opened three joint research centers with Chinese universities (Tsinghai, Jia Tong, Chongqing). Management schools cooperate closely with China, and the BI Norwegian School of Management in Oslo has had a partnership with Fudan University as part of a joint MBA since 1996.

While the number of Chinese students coming to study in Norway is steadily increasing (4% of students, in fourth place as the country of origin of foreign students in 2009), the number of Norwegians that went to study in China has fallen by over 50% the last two years. To sustain the influx of students from China, Norway launched NorAlumni China in September 2010. This network aims to assist Chinese students to study in Norway and help them to continue to interact. The network NorAlumni China will thus allow universities to keep track of their alumni and Norwegian companies to have contacts with students already having knowledge of the Norwegian lifestyle.

Scientific cooperation is an excellent way to develop relations between both countries as the challenges facing China -- environmental, social, and energy -- are important. The appointment of a scientific adviser to the Norwegian Embassy in Beijing last September is yet more evidence of collaboration.

*To download (free):*

*"Scientific and academic cooperation between Norway and China" - Embassy of France in Norway – October 1, 2010 - 18 pages pdf*

[http://www.bulletins-electroniques.com/rapports/smm10\\_044.htm](http://www.bulletins-electroniques.com/rapports/smm10_044.htm)

*Sources: December 2010*

*Electronic Bulletin, December 21, 2010*

*Jean-Louis Duclos, Attaché for Science and Technology – Scientific Cluster at the Embassy of France in Norway - [science@france.no](mailto:science@france.no)*

## **18 Poland**

### **18.1 Poland questions merits of EU 'research target'**

Polish politicians are questioning the merits of the EU's aim to increase investment in research and development (R&D) to 3% of GDP in the EU as a whole by 2020, but the issue could at least raise awareness of the fact that the country is lagging behind in innovation.

Poland will have difficulty spending 3% of its GDP on research and development (R&D) as it is only "among the group of moderate innovators, with an innovation performance considerably below the EU-27 average but an above average rate of improvement," according to the European Innovation Scoreboard (EIS) for [2009](#).

The EIS ranked Poland 29<sup>th</sup> out of 35 European countries for innovation. The country only spent 0.56% of its GDP on R&D in 2006 – a fraction of the EU's 3% goal. Moreover, Poland is way behind many countries in terms of the number of scientific articles appearing in renowned publications and the number of patents submitted, stated Professor Andrzej Wiszniewski from the State Committee for Scientific Research.

Among the countries in the OECD (Organization for Economic Co-operation and Development), Poland has submitted just 0.4% of the total number of patents. On average, the Czech Republic submits twice as many patents as Poland every year, yet only has a population of around 10.5 million, compared to Poland's 38.2 million.

But in fact, the 3% target for investment in R&D is for the EU as a whole. Some older members are near or even above the target, while the newcomers are lagging behind (see Positions).

Polish European Affairs Minister Mikołaj Dowgielewicz called for "more output, less input" in the 'Europe 2020' strategy and implied that the new innovation and research strategy had been drafted only for the older EU members. He cited as an example Germany, which has already attained the 3% GDP target for R&D. He also stressed that the strategy was only at discussion stage and that it could be improved with time.

Another Polish politician, Janusz Lewandowski, who is European commissioner for budget and financial programming, sees the glass as half-full, saying that 'Europe 2020' can meet the needs of all member states if some changes are made. He also stated that cohesion policy should remain the primary instrument of Europe 2020, echoing views recently expressed by leaders of the Visegrad group of nation.

Former European Regional Policy Commissioner Danuta Hübner also said that she feared that the new strategy would imply changes to the EU budget, to the detriment of cohesion policy. Lewandowski was more diplomatic, saying the 3% target did not represent any "danger" for other EU policies. Spending on innovation will be not be used "instead of agriculture" but as an "additional element," he stressed.

Polish Vice-Minister for Industry Grażyna Henclewska recalled that at this point, the European Commission paper was just a draft. The Europe 2020 strategy is "not an obligatory, binding document, but only a discussed proposition made by the European Commission," she said. Although she sees the goal of spending 3% of Polish GDP on science as too optimistic, Henclewska recognized that it would at least instigate a discussion about the state of research and development in the country.

#### Positions

"The European Commission has never proposed under the Europe 2020 Strategy a 3% goal for Poland and will not be making such a proposal," Mark English, spokesperson to Research and Innovation commissioner Máire Geoghegan Quinn told EurActiv.

The Commission proposed, and EU leaders agreed, that each country should set different, ambitious but realistic national targets taking into account their starting positions, he said. The exact national targets are likely to be endorsed by the European Council in June, following current discussions between the Commission and Member States, which have been going very well, he added.

It is certain that for new member states, including Poland, the final targets will be considerably under 3%, while for some of the leading countries in terms of current investment levels, they will be significantly higher than 3%, the spokesperson explained.

*Sources: June 2010*

*EurActiv Web Site, Published: 01 June 2010 | Updated: 02 June 2010 - [www.euractiv.com](http://www.euractiv.com)*

## **18.2 The last edition of the WELCOME Programme (Poland)**

The aim of the [WELCOME Programme](#)\* is to create a possibility for outstanding scientists from abroad and recognized researchers who have recently come to Poland (both Polish and foreign), to conduct innovative research in our country. In Welcome Programme outstanding scientists who plan to set up research teams in Poland (to conduct research in the areas of *Bio*, *Info*, *Techno*) may apply for grant money and personal stipends for themselves and their team members.

*Closing date for application: 15 October 2010*

*[Documentation of competition](#)*

*[Application form](#)*

*Sources: June 2010*

*\*The WELCOME Programme is co-financed from European Regional Development Fund within Innovative Economy Operational Programme.*

### 18.3 Polish Reform of Higher Education

The process of modernization of the Polish Higher Education continues. The government led by Barbara Kudrycka, Minister for Higher Education and Science, introduced in February 2010 seven draft laws relating to reform of higher education and science. Six bills of Science have already been adopted by the Government on March 18<sup>th</sup>, 2010 and published in the Polish Official Journal on June 4<sup>th</sup>, 2010. They essentially provide an improved system of financing with a focus on research quality.

The major legislative movement is supported by substantial EU funds. The objective of this reform is to improve the training of future scientists with innovation and new technologies and qualified youth in the humanities, in order to make education more in tune with the needs of the labor market, practice and everyday life.

The discussions at the Polish Government continue to be contentious given the challenges of academia and rectors' conference, and were distributed in the Polish press. Academics denounce the university system's failure including the recruitment of teachers and university professors, the quality of teaching and the restrictions on the use of non-university teachers. The Rectors' Conference also had reservations about the performance and effectiveness of methods of allocation of funding proposed by the government.

#### *Polish presidents want to decide on reforms*

All rectors' conferences have accepted the 'Development Strategy of Higher Education: 2010 - 2020' prepared by the academic community. Now, the Minister for Higher Education and Science, Barbara Kudrycka must decide if she wants to promote her own project. According to the rectors, the decision is a success. Despite many differences, the academic was able to agree on this project. It is a sign for the ministry that we are unanimous - said Professor Waldemar Tlokinski, president of the Conference of Rectors of Higher Vocational Schools.

The point of divergence between the Ministry and the academic community lays in the way funds would be allocated to higher education. The rectors' proposal provides for the transmission of the jurisdiction of the Ministry to an independent public agency that would negotiate contracts with institutions for 3 or 5 years grants. The Ministry wishes to control such agency.

In addition, rectors propose that private schools are subsidized by the state. The minister would also reduce differences between public and private sectors: both should submit a proposal to compete for awards. The only criterion of choice would be the quality of the proposed project. Finally, the university presidents are opposed to the government's action to ban universities from recruiting doctors into their midst.

The presidents unanimously argue that the academia's unanimously is a strong signal towards the adoption of their draft presented last December at the University of Warsaw. Minister Kudrycka says that she has two proposals to reform higher education and the debates are underway.

*Sources: July 2010*

*- Electronic Bulletin, July 9, 2010*

*- Polish Ministry for Higher Education and Science: <http://www.nauka.gov.pl/na-skroty/reformy/>*

### 18.4 Franco-Polish Cooperation Within the FP7

Among countries of the European Union, a growing share of research cooperation is carried out within the Framework Programme for Research and Development (PCRD) as the budget increases (from 19 M Euros for FP6 2002-2006 to 53 M Euros for FP7 2007-2013).

Like all members of the EU, Poland has a national contact point ("Punkt Krajowy Kontaktowy" KPK) responsible for promoting the FP in Poland, and whose data can provide a detailed inventory of the current Franco-Polish cooperation within the FP7 at mid-term (June 2010).

After 170 calls for proposals, Polish participation is as follows:

- Number of Polish submissions --979 (compared to 5021 for France)
- Number of projects with Polish participation: 774 (2937 for France)
- Success rates by institution in Poland: 17% (24% for France)
- Number of coordinated projects: 10 (76 for France).

With regard to the Franco-Polish cooperation, the number of projects is 414, involving respectively 514 Polish institutions and 825 French institutions. The budgetary impact of such cooperation for laboratories are respectively:

- Poland: 93 million (spread over 514 institutions, 180 k Euros per institution),
- France: 334 million (spread over 825 institutions, or 405 k Euros per institution).

The main areas of cooperation (in number of projects) are:

- Information Communication and Technology (ICT): 66 projects;
- Infrastructure (except energy): 57 projects;
- Transportation (including aeronautics): 50;
- Nanos, Materials and Production Technologies: 36;
- Environment: 30;
- Health: 26;
- Food, Agriculture and Biotechnology: 22;
- Security: 15;
- Humanities and Social Sciences: 15;
- Space: 12;
- Energy: 10; etc.

In addition, 29 specific projects benefit small and medium enterprises (SMEs) and 21 projects "persons / people" for the unilateral exchange or mobility of researchers at all levels (PhD students, senior researchers).

Following is the list of institutions included in the first places with the number of corresponding projects:

#### *Poland:*

- *Academic institutions:* the Polish Academy of Sciences (IPPT PAN, Institute of Applied Mathematics and Technology in Warsaw with 18 projects, ICB PAN Institute of Biochemistry, Poznan with 6 projects, etc.), Warsaw University (20), Polytechnic School of Warsaw (18), Polytechnic School of Poznan (6), AGH University of Mining and Metallurgy in Krakow (5), etc.

- *Companies:* ITTI with 6 projects, (a Poznan SME specializes in consulting and applied research in the field of ICT; Mostostal with 5 projects (a Warsaw SME specializes in civil engineering; Telecom; Polska SA, the leading Polish telecommunications operator, etc.)

- In addition, institutes so-called "industry professional," partially privatized, as the institute IET of Warsaw in the field of electronics with 6 projects, etc..

#### *France:*

- 66 projects with CNRS; CEA (36); INRA (16); INRIA (12); CNES (7); Armines (6), etc.

- 7 projects with Snecma; Thales (7); ARTTIC (7); Airbus France (5); Dassault (5); France Telecom (5), etc.

#### *Sources: October 2010*

- *Electronic Bulletin, October 15, 2010*

- *Krajowy Punkt Kontaktowy:* <http://www.kpk.gov.pl/index.html>

- *European Commission, CORDIS, Research Financing :* [http://cordis.europa.eu/home\\_fr.html](http://cordis.europa.eu/home_fr.html)

### **18.5 Creation a Second Research Funding Agency (Poland)**

On October 1<sup>st</sup>, 2010 the National Center of Sciences ("Narodowe Centrum Nauki" NCN) was created by law. This new funding agency for basic research will be based in Krakow. Its role will complement the funding Agency for Research and Development (Narodowe Centrum Badan i Rozwoju, NCBiR), founded



in 2007 and headquartered in Warsaw: the first will be devoted to basic science, the second to applied science. The two agencies will receive the statutory 10 per cent of the national budget devoted to research.

#### *1. A funding agency for Basic Research: the National Center for Sciences*

The NCN will be governed by a board - being appointed by the Ministry of Science and Higher Education - composed of 24 members, all doctors. This Council will select the Director of NCN to represent the structure and establish business and financial plans. The Council will create 30 disciplines or groups of subjects and appoint their respective coordinators. Each discipline will have a panel of reference experts. For each discipline, the agency will allocate funding on the model of *calls for applications* which will fund:

- Purchases of equipment,
- Support for the creation of laboratories for junior researchers,
- Support for ambitious research projects led by senior researchers
- Award of doctoral and postdoctoral fellowships.

The proposed projects will be evaluated by panels of experts in each discipline. Successful projects will also be assessed retrospectively, and all measurable elements will be taken into account (publications, patents, new businesses and activities, etc.). In addition to its own fundraising activities, the NCN should encourage private funding of research activities and participate in the dissemination of scientific culture. In practice, the NCN should be fully operational by March 2011.

#### *2. A funding agency for Research and Development: the National Center for R&D*

The agency created in 2007 took off in 2008. It was endowed with 125 million Euros in 2009 and performs three major classes of shares:

- Organizes and funds advanced technologies for energy generation (budget 67 million), interactive systems for an interdisciplinary scientific and technical information (13 million), integrated systems for reducing energy consumption and maintenance in buildings (7 million), etc.
- Manages competitive programs as delegated by the Ministry of Science and Higher Education
- Manages the Polish participation in European programs (ERA-NET EuroNanoMed, EUROGIA and Clean Sky +, EUREKA and Eurostars).

*Sources: October 2010*

- *Electronic Bulletin, October 15, 2010*

- *NCN (under construction): <http://www.ncn.pl/>*

- *NCBiR: <http://en.ncbir.pl/>*

## **19 Portugal**

### **19.1 Ciência 2010 - Fourth meeting on Science and Technology in Portugal**

From July 4 to 7, 2010 took place in Lisbon a large annual scientific conference bringing together researchers, businesses and institutions. The event was organized by the Council of Associated Laboratories and the Foundation for Science and Technology in collaboration with Ciência Viva. It was inaugurated by Alexander Quintanilha President of the Council of Associated Laboratories, João Sentieiro, president of the Foundation for Science and Technology, Rosalia Vargas, President of Living Science, Jose Mariano Gago, Minister of Science, Technology and Higher Education, and José Sócrates, Portuguese Prime Minister.

This major national event real showcase of science in Portugal aims to promote the development of collaborations and networks between institutions, identifying new opportunities, bringing new consortium of companies and coordinating new programs of post-graduate training.

The event brought together researchers from all areas, companies and leaders of public research institutions and private institutions of higher education and other entities involved in the scientific and technological development of the country. Hundreds of researchers from over 60 companies and 150

research institutions presented their work. Nearly 2,500 participants have attended over one hundred working sessions. Young students involved in research showed broad participation, allowing a real exchange between generations. The major research areas of Portugal have been highlighted: health sciences, information technology, nanotechnology and sustainable processes, marine and social science. All workshops have been launched on the internet.

*Sources: July 2010*

- *Electronic Bulletin, July 26, 2010*

- <http://www.ciencia2010.pt/home/>

## 20 Romania

### 20.1 Ecole Normale Supérieure of Bucarest (ENS-B) (Romania)

In October 2001 an Ecole Normale Supérieure (ENS) opened in Bucharest, offering to the elite math students 3 years of high level personal training for a fast integration into the activities of advanced research in mathematics. This year the seventh class will graduate from the school. In May 2007 the Ecole Normale Supérieure in Paris organized a scientific audit of the ENS-B which highlighted the high quality of education the school provided as well as the rising interest among students. In 2002 a math-computer specialization was organized and the ENS-B Department of Biology began operation in the autumn 2008.

The ENS-B offers 3-year curricula at the Masters level - one year for the students in their final year of undergraduate degree at a university and two years of Masters level for students already having obtained a License (bachelors). The Mathematics Department offers Masters degree programs in Mathematics Research (one in Algebra, Geometry and Topology, and one in Differential Equations, Stochastic Analysis and Modeling) and a Master's program of Mathematical Research - Computers. The Biology Department offers a Master program of Research in Biological Chemistry.

The ENS-B works in partnership with the Simion Stoilov Institute of Mathematics of the Romanian Academy and its Institute of Biochemistry. Its activity is managed by a Scientific International Council. Each year the program is updated by the Scientific Council, a call for applications for international courses is launched, and the applications are evaluated by the Scientific Council which proposes the list of courses for the coming year.

Students are selected through a rigorous entrance exam consisting of a written test and an oral examination based on a list of topics proposed by each candidate, on their basic knowledge, and on proposed research projects. The students admitted choose three courses per semester from the course list offered by the Scientific Council and participate in the scientific community life with partner institutes. The School does not collect fees and gives incentive awards to students with good grades along with partial support for their participation at summer school. The Masters program is completed with a research project under the direction of a coordinator chosen by the student and managed like a dissertation.

The purpose of the ENS-B is to provide an institution in Romania able to offer elite students a personalized European level of a positive and rapid integration into international research experiences, while remaining in contact with activity centers performing research in Romania. It provides in particular:

- A la carte courses in a high level program oriented towards current problems;
- Integration into research groups;
- Annual bonuses for good results; and
- International contacts to pursue work in doctoral research programs in advanced research centers.

*Sources: May 2010*

*Electronic Bulletin, May 10, 2010*

*Professor Radu PURICE - Scoala Normala Superioara Bucuresti, 21, Calea Grivitei, Bucarest - Phone: 0040 21.311.77.80 - Email : [snsb@imar.ro](mailto:snsb@imar.ro)*

## **20.2 The New Europe College: an Institute for Advanced Studies in Bucharest (Romania)**

The New Europe College (NEC) is an independent institute for advanced studies in humanities and social sciences. Founded in 1994 by Professor Andrei Plesu (philosopher, art historian, writer, Romanian Minister of Culture from 1990 to 1991, Romanian Minister of Foreign Affairs from 1997 to 1999), and is the first and – at the moment at least -- the only of its kind in Romania.

Modeled other institutes of advanced studies in Europe and the United States, NEC operates mainly through its grants programs for research, awarded through an annual competition. Awardees are selected by a panel of experts from Romania and abroad and receive a grant for one academic year or one semester. During the academic year, fellows participate in weekly meetings (the Wednesday Symposia), in which they present their research projects, which are discussed by the interdisciplinary group. In its early years, the College was focused, through its grant program, on scholars and researchers from Romania. The NEC community has since expanded both in number (it now has over 500 awardees and alumni), and in geographic terms, expanding from a "regional" dimension to an international one.

Dedicated to research in advanced studies, NEC aims to provide Western style working conditions to young Romanian researchers and academics in the fields of humanities and social sciences. These amenities are also provided to foreign researchers invited as fellows in an institutional context to encourage critical interdisciplinary debates. The activities, organized by the NEC, are intended to synchronize research in Romania and the region with the international research communities and to facilitate contacts between Romanian and Eastern European specialists with worldwide research centers. To this end, the NEC has developed a vast network of international contacts, which have also enabled it to engage in collaborative projects.

The Hannah Arendt Prize, awarded to the New Europe College in 1998 in recognition of its exemplary role in the renewal of research and education, confirms the international prestige enjoyed by the college. In 1999 the Ministry of National Education of Romania recognized the New Europe College as an institutionalized form of continuing education and professional training.

New Europe College organizes for its fellows, and for a wider circle of scholars and researchers from Romania, an ongoing program of conferences, whose participants are eminent scientists from Romania and abroad. The College also organizes special events such as seminars, workshops, symposia and national and international conferences.

The publications that result from these activities are published for international circulation, resulting from research fellows. In addition to these publications, are proceedings from conference and other scientific events organized by the NEC.

*Sources: May 2010*

*Electronic Bulletin, May 10, 2010*

*New Europe College - Institute for Advanced Study - Dr. Anca Oroveanu, Academic Director - Emails : [ancaoro@nec.ro](mailto:ancaoro@nec.ro) ; [nec@nec.ro](mailto:nec@nec.ro) <http://www.nec.ro>*

## **20.3 Romania calls on private sector to help boost R&D**

Romania has decided that its national target for boosting research and development will be 2% by 2020, but to reach this goal, the private sector would have to increase its financial effort six or seven-fold compared to current levels.

After Romanian President Traian Basescu declared in late April that Romania would not be able to attain the target of spending 3% of GDP on R&D by 2020, which is set out in the EU's new 'Europe 2020' strategy, the Romanian authorities came up with a more "realistic" figure of 2%.

"We cannot reach the 3% of GDP allocation objective for research and development and we'll have to establish what number is possible at national level. Even though it wouldn't be a problem for the

government to allocate 1%, for the private sector to allocate 2% would be difficult. And even if we were to find resources for 3%, what is our research infrastructure like? Is our research capable of bringing out results in time?"

These were the words of President Basescu in late April 2010.

More recently, Dragos Ciuparu, vice-president of the National Authority for Scientific Research (ANCS), said that the Europe 2020 strategy links research closely to innovation. Ciuparu said a realistic budgetary allocation target would be 2% of GDP by 2020 for research, development and innovation. This figure is halfway between a pessimistic scenario, with an allocation of 1.8%, and an optimistic one with 2.2%, he stated.

Rolanda Predescu, a director at ANCS, confirmed that "the 3% target is especially ambitious and we would have liked to have it, but it is impossible in the budgetary conditions". She says that the realistic figure of 2% was the result of an analysis by the government's secretariat and ministries. To achieve this target, Romania will need to constantly increase its annual allocations for innovation. The private sector will have to increase allocations for R&D six or seven-fold compared to current levels, she said. Predescu also said that in 2008, the resources allocated to R&D in the EU were at the level of 1.9% of GDP, while in 2009 this increased to 2.06%. "Romania will reach today's average EU level in 2020," she predicted.

On the other hand, Predescu signaled that Romania employs only a third of the average number of researchers in other EU member states.

ANCS Vice-President Ciuparu was also skeptical, asking the question: "A 2.2% increase scenario would mean 3,000 more researchers per year. Where are we going to get them from?" Predescu spoke about the need for incentives to boost research and better use of EU funding.

At present, Romania participates in 249 programs from the EU's Seventh Framework Program for Research ([FP7](#)), in 16 projects under the [ERA-NET](#) scheme and in nine under [ESFRI](#), the European Strategy Forum on Research Infrastructures projects, as well as in five [JTIs](#) (Joint Technology Initiatives) and ten international research bodies, including CERN. Romania also has the ambition of joining seven European joint programs in the fields of health, agriculture, climate change, water management, cultural heritage and 'Urban Europe'.

*Sources: June 2010*

*EurActiv Web site, Published: 03 June 2010 - [www.euractiv.com](http://www.euractiv.com)*

#### **20.4 French Companies Invest in Training of Talented Young Romanians**

The Embassy of France and several French companies have teamed up for the training of young talented Romanian in France. For the first time, several public-private partnerships will be established next year. The aim is to meet the needs of targeted training of French companies operating in Romania and to promote the development of young professionals in their midst.

By pooling their resources, business companies and the French Embassy will award more than a dozen scholarships or research grants that will help young Romanians to undertake a second year of Master's or Ph.D. study jointly supervised in France. During their stay, students will have the opportunity to conduct several months of practical training within business companies in France. Each candidate will be selected in the prospect of career advancement within the company.

*Sources: December 2010*

*Electronic Bulletin, December 17, 2010*

#### **20.5 The "Foundation Mathematics Sciences of Paris" Investing in Franco-Romanian Mathematics Skills Cluster**

Starting with the academic year 2011, the "Foundation Mathematics Sciences of Paris" in partnership with the University of Bucharest will offer scholarships (15,000 Euros per year) to qualified students eager to

pursue a scientific career in France. This initiative is part of strengthening academic and scientific cooperation between France and Romania in the mathematical sciences.

The Department of Cooperation and Cultural Action launched a call for applications to support university students seeking a joint Masters degree or above. This call for proposals is aimed at teachers and researchers at Romanian academic institutions developing a masters and/or PhD programs in partnership with a French higher education institution.

The assistance of the Embassy of France will:

- improve the visibility and attractiveness of French-Romanian joint training;
- encourage the emergence of new joint training;
- strengthen the excellence of Franco-Romanian joint training;
- provide an opportunity for education leaders to promote the mobility of students to France;
- promote exchanges of teachers;
- support young researchers from these training and research partnerships between France and Romania.

*Sources: December 2010*

*Electronic Bulletin, December 17, 2010*

## **20.6 2011 Embassy of France in Romania Call for Franco-Romanian Scientific Projects**

As part of an effort towards strengthening academic and scientific cooperation between France and Romania, the Department of Cooperation and Cultural Action of the Embassy of France in Romania is calling for proposals to support innovative scientific projects between France and Romania.

This call for projects is directed to Romanian and French academics and scientists wishing to organize a joint scientific event (workshop, symposium, conference, summer school) and will:

- promote the emergence of scientific cooperation focused, structured and visible;
- enhance and give a new impetus to an existing cooperative venture;
- discover the quality of French researchers and research facilities in Romania.

Application procedure:

The deadline is March 20, 2011.

Information and application available at: [http://www.ambafrance-ro.org/index.php/fr\\_FR/dossiers/la-cooperation-et-l-action-culturelle/la-cooperation-universitaire-et-scientifique](http://www.ambafrance-ro.org/index.php/fr_FR/dossiers/la-cooperation-et-l-action-culturelle/la-cooperation-universitaire-et-scientifique)

*Sources: December 2010*

*- Electronic Bulletin, December 17, 2010*

*- Fabien FLORI, Attaché for Coopération Universitaire et Scientifique, [fabien.flori@diplomatie.gouv.fr](mailto:fabien.flori@diplomatie.gouv.fr)*

## **21 Slovakia**

### **21.1 Slovak University Ranking for 2009**

The ARRA (Akademická rankingová a ratingová agentúra) [1] Academic Rating and Classification Agency, is an independent agency whose members come from across the Slovak academic and scientific arena. One of the first goals of this agency is to provide the public with information on the quality of Slovak higher education through the publication of a regular ranking of universities and institutions of higher education which takes into account the quality of teaching and quality of science and research.

The ARRA ranking is by broad subject areas: Agronomy, Medicine, Theology, Philosophy/Humanities, Arts, Natural Sciences, Economics, Law, Pedagogy, Technical Engineering and "other categories of studies". Moreover, the Slovak universities are often "general" and therefore the classification is done

primarily by faculty and by university. For example, the Comenius University in Bratislava has a medical school and law school. These are assessed and classified separately from other faculties within the same sector in other universities.

*Sources: January 2010*

- *Electronic Bulletin, January 7, 2010*

- [1] <http://www.arra.sk>

- *Presentation of the higher education system in Slovakia as well as information on Slovakian universities:*  
<http://redirectix.bulletins-electroniques.com/auT6O>

## **21.2 Program of the Slovak Academy of Sciences for 2010**

For 2010, the Slovak Academy of Sciences has already scheduled a number of events. The following list includes the titles, locations and dates of conferences, as well as contacts and related links for more information.

- "*Critical reflection on Slovak Literature in 2009*" Institute of Slovak Literature, Konventná 13 Bratislava from January 19, 2010 - Contact: @ Dana.Huckova savba.sk

- "*Man and His Speech*" [1]: Smolenice of January 20-22, 2010 - Contact: @ simkova.mariakorpus.juls.savba.sk

- "*EU-US Seminar: Dynamics of DNA Repair Enzymes Involved in Nucleotide Excision Repair and Inter-strand Crosslink Repair: From Molecules to Man.*" Smolenice May 23-27, 2010 - Contact: @ miroslav.pirsel savba.sk

- "*16th Workshop on Dielectrics in Microelectronics WoDiM-2010*" [2]: Bratislava from June 28-30, 2010 - Contact: WoDiM 2010 Conference Office - Institute of Electrical Engineering, SAS - Dúbravská cesta 9 - 841 04 Bratislava, Slovakia - Tel. +421 2 5477 5806 - Fax: +421 2 5477 5806 - Email: info@wodim2010.sk

- "*14th Czech and Slovak Conference on Magnetism CSMAG'10*" [3]: Kosice from July 6-9, 2010 - Contact: csmag-secr@saske.sk

- "*TOXCON 2010: Advanced Toxicology Course*" [4]: Stará Lesna, Vysoke Tatry from September 6-8, 2010.

- "*TOXCON 2010: Borderless Toxicology*" [5]: Stará Lesna, Vysoke Tatry from September 8-10, 2010  
Contact: Slovak Toxicology Society SETOX, Dúbravská cesta 9 - 841 04 Bratislava - Tel. +421 2 5941 0664 - Email: info@setox.eu

*Sources: January 2010*

- *Electronic Bulletin, January 2010*

- [1] <http://www.juls.savba.sk/podujatia/clovek.html/>

- [2] <http://www.elu.sav.sk/wodim2010/index.html>

- *Institute of Electrical Engineering : [http://www.elu.sav.sk/index\\_en.html](http://www.elu.sav.sk/index_en.html)*

- [3] <http://csmag.saske.sk/>

- [4][5] <http://www.toxcon.sav.sk/>

- *Additional information on conferences in Slovakia : <http://konferencie.education.sk/>*

## **21.3 Slovak Government Seeks Private Investors**

On January 31, 2010, at a conference entitled "Science, Politics and the State," the President of the Slovak Republic, Ivan Gasparovic said: "*In our country, the business world still hasn't understood the need to be involved in the coordination of science.*"

This statement is in response to difficulties reported by the Minister of National Education, Jan Mikolaj, on programs of public-private financing proposed by the government. The Ministry of Education prepared a



law adopted by the Slovak Parliament in 2008 and implemented in August 2009, to develop private funding for research. Under this law, the state provides financial support to entrepreneurs who invest in research. Unlike other countries, Slovak companies still invest little in research. Private sector research investment may seem substantial as a percent of overall research spending (39.5% in 2007), but these private investments are actually very low because the overall spending very low (0.46% of the 2007GDP). And though the government has made efforts in recent years to increase research expenditures, private investors have not.

These initiatives for the private sector should create favorable conditions for increased funding for scientific development. A larger and more efficient private sector involvement in the development of the research is considered by Jaromir Pastorek, President of the Slovak Academy of Sciences, and many officials in Slovakia, as inevitable.

Adding that support for projects ranging up to 2 million Euros is available from the Ministry of Education, projects beyond that sum would be funded by the government.

*Notes: [2]*

- Share of total research budget in GDP: 0.46% in 2007

- Share of private sector in the overall budget for research: 39.5% in 2007

- Share of public sector in the overall budget for research: 56.9% in 2006

*Sources: March 2010*

*Electronic Bulletin, March 2, 2010*

#### **21.4 Slovakia calls for its own R&D target**

The Slovak government has set itself the goal of investing 1.8% of its budget for GDP in research and development (R&D) by 2015. This target, smaller than 3% target for the EU as a whole by 2020, is still to be negotiated.

According to the country's deputy Prime Minister for the Knowledge Society, European affairs, Human Rights and Minorities, Dušan Čaplovič, Slovakia has "a tradition of planning everything in five-year or ten-year terms and from our experience, we don't consider setting numbers without real analysis as natural: because they are unrealizable". The government would prefer to see more output-oriented measures, he said.

Čaplovič's words echo those of Slovak Prime Minister Robert Fico. Fico has expressed concern that the 'Europe 2020' initiative will suffer the same fate as its predecessor, the Lisbon Strategy, because some of the targets – including the 3% GDP target for R&D – are in his words unattainable.

In fact, the 3% target for investment in R&D is for the EU as a whole. Some older members are near or even above the target, while the newcomers are lagging behind (see [Positions](#)). Fico proposed that the country launch its own plan for expenditure on R&D. "The long-term target of Slovakia is to invest 1.8% of GDP in the research and development area by the end of 2015," he stated.

Yet Slovak officials recognize the urgent need to improve the R&D situation in Slovakia – citing the lack of basic infrastructure and the huge gap between the capital Bratislava and the rest of the country as two of the biggest problems. To tackle the shortcomings, the government launched a special operational program (OP) dedicated to meeting its targets. "We are one of few countries to have built a special research and development OP, where we allocated a significant sum of money from EU funds," said Prime Minister Fico in an interview with Slovak press agency TASR.

With a budget of €1.2 billion, the R&D program is the country's fourth-largest OP after those for transport, regional development and health care.

*Public vs. private investment*

The Slovak government predicts that two-thirds of its 1.8% research target will be funded by the private sector. Some consider this a bold statement, considering that around 52% of funding currently comes from public sources, only 34% comes from private sources and the remaining 14% comes from abroad.

Unlike the government, private companies still believe public investment in R&D is insufficient and do not just see an increase in government spending as a number, but as a necessity. "If the Slovak economy is to successfully develop further, we have to significantly scale up public expenditure in order to support our R&D. I stress the words 'public expenditure'. Moreover, we need to fundamentally change and improve measures through which our state supports these activities," said Martin Bruncko, founder and CEO of Neulogy, a private R&D and knowledge-management company. "That is the only way to lure more private investment in this particular area and hence improve the competitiveness of our country," he explained, adding that "in terms of research, we are now tens of years behind other small EU countries like Denmark, Finland and Austria".

According to government data, Slovakia is now spending around 1.2% of its GDP on R&D and innovation. Although this may not seem enough, the figure has grown significantly in recent years. According to the European Innovation Scoreboard for [2009](#), "Slovak innovation performance is well below the EU-27 average but the rate of improvement is above that of the EU 27".

However, quantity does not always mean quality. "We annually invest around €1 billion in research and development but our potential is decreasing," says Milan Gregor, chairman of HLG ManauFuture SK, a company.

Deputy Prime Minister Čaplovič admitted that "though government spending in research and development has grown significantly over the years, Slovakia is still at the bottom of EU and OECD charts in this area". "The number of Slovak researchers is below average and we also lag behind in other output indicators such as patents, publications and quotations," he added.

#### *Positions*

"The European Commission has never proposed under the Europe 2020 Strategy a 3% goal for Slovakia and will not be making such a proposal," Mark English, spokesperson to Research and Innovation commissioner Máire Geoghegan Quinn told EurActiv.

The Commission proposed, and EU leaders agreed, that each country should set different, ambitious but realistic national targets taking into account their starting positions, he said.

The exact national targets are likely to be endorsed by the European Council in June, following current discussions between the Commission and Member States, which have been going very well, he added. It is certain that for new member states, including Slovakia, the final targets will be considerably under 3%, while for some of the leading countries in terms of current investment levels, they will be significantly higher than 3%, the spokesperson explained.

*Sources: June 2010*

*EurActiv Web Site, Published: 01 June 2010 | Updated: 02 June 2010 - [www.euractiv.com](http://www.euractiv.com)*

### **21.5 Priorities Of The New Government for Higher Education and Research (Slovakia)**

The legislative elections of June 12<sup>th</sup>, 2010 resulted in a new coalition of center-right who officially took office Thursday, July 8.

The program priorities of the government in research and higher education are:

- Revision of the Universities Act (2003);
- Introduction of international standards for the accreditation of universities (presence of foreign experts in the accreditation commission);
- Competition among universities to promote their presence in the Top 500 ranking of world universities (Shanghai ranking);
- Attracting foreign universities;
- Increase funding for the best scientific fields;
- Improve the adequacy of university research with the needs of the labor market and technological and industrial needs, making better use of European funds;
- Support the establishment and development of technology parks with European standards;

- Encourage student mobility to foreign universities for short stays;
- Develop bilingual university programs;
- Cancellation of academic qualifications wrongly obtained;
- Setting up support centers for physically handicapped students;
- Establishment of a system of funding sports and cultural activities within universities;
- Development of distance learning (e-learning).

This program will be implemented by the new Minister of Education, Eugen Jurzyca. Eugen Jurzyca is an economist, he has long remained outside of any political party as policy advisor in Slovakia. He joined in 2009, the center right party SDKU [1] as leader of the group of experts to propose measures against the crisis.

*Sources: July 2010*

- *Electronic Bulletin, July 12, 2010*

- [1] SDKU:

[http://en.wikipedia.org/wiki/Slovak\\_Democratic\\_and\\_Christian\\_Union\\_%E2%80%93\\_Democratic\\_Party](http://en.wikipedia.org/wiki/Slovak_Democratic_and_Christian_Union_%E2%80%93_Democratic_Party)

- [2] INEKO: <http://www.ineko.sk/about/ineko-institute-for-economic-and-social-reforms>

- Open Society: <http://www.osf.sk/en/Default.aspx?CatID=43>

## 21.6 Research in Slovakia - French Embassy in Slovakia Report

Slovakia is a young state created in 1993 as a result of the division of Czechoslovakia. Like the Czech Republic, it is heir to knowledge and skills developed by various former scientists from Czechoslovakia in the fields of Engineering, Physics, Chemistry, Engineering, Medicine, etc. Scientific exchanges between the two countries remain strong and contribute to the vitality of the current Slovak research. The two are now part of a wider European context enabling new collaborations and access to new sources of funding.

If the 90s saw a slowdown in research activities, successive governments have gradually reinvested in this area over the past 10 years. Current policy issues in Slovakia include promoting investment, cooperation with private-sector research, and increasing the participation of Slovak teams in community projects.

The Slovak scientific context is little known and few reference materials are available in French. This report aims to provide a comprehensive overview of Slovak research to French readers. Various aspects of research are mentioned regarding the country's politics, key agencies that drive the research, performance, staff allocation, funding arrangements and partnerships. Research stakeholders interested in in-depth scientific knowledge of Slovakia should follow the links and contacts at the end of this report.

*Sources: August/September 2010*

*Electronic Bulletin, September 9, 2010-09-09*

*Report (in French) available at:*

[http://www.bulletins-electroniques.com/rapports/smm10\\_030.htm](http://www.bulletins-electroniques.com/rapports/smm10_030.htm)

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## 21.7 Reconciliation between the Slovak Academy of Sciences (SAV) and the Academy of Sciences of the Czech Republic (AVCR)

The leaders of the Slovak Academy of Sciences (SAV) and Czech Republic (AVCR) met on October 23rd in Smolenice (Slovakia). The theme of the meeting was related to research funding in both countries. The main topic of the agenda was developing a common strategy in order to better use EU structural funds and to improve the representation of the two countries in European organizations such as the ESF (European Science Foundation), ERA (European Research Area) or ALLEA (All European Academies).

*Sources: November 2010*

*Electronic Bulletin, November 16, 2010*

*Press release TASR (Tlacova agentura Slovenskej republiky) October 23, 2010 - <http://www.tasr.sk/23.axd?k=20101023TBB00131>*

### **21.8 The Slovak government encourages the scientists' mobility**

The government extends grants for researchers' mobility until the second semester of the academic year 2010-2011: it will allocate an additional 500,000 Euros to sponsor Slovakian researchers' trade who must travel abroad or foreign partners needing to stay in Slovakia. The grants are open to students, PhD students, postdoctoral and researchers. These scholarships cover travel expenses only for the period from February to August, 2011. Candidates may apply until November 24, 2010.

*Sources: November 2010*

*Electronic Bulletin, November 16, 2010*

### **21.9 International Conference on Grid Computing in Bratislava (Slovakia)**

The Institute of Computer Science of the Slovak Academy of Sciences hosted a conference on grid computing for solving complex problems. This 3-day conference (November 8-10, 2010) was organized in partnership with the European consortium Grid Initiative (EGI). Slovak experts, but also Polish, Czech, Hungarian, Swedish and German intervened. This conference addressed issues of development and use of grid computing in Europe.

*Sources: November 2010*

*Electronic Bulletin, November 16, 2010*

*<http://web.eu-egi.eu/about/about/>*

*Press release TASR November 8, 2010 - <http://www.tasr.sk/23.axd?k=20101108TBB00451>*

### **21.10 The Slovakian national plan on renewable energy accepted**

The Slovak government approved on October 6, 2010, the national plan for the development of renewable energy sources (RES), proposed by the Ministry of Economy and Construction [1].

After a delay of three months on the schedule requested by Brussels, the national project meets Directive 2009/28/EC of the European Parliament and Council of 23 April 2009 on promoting the use of energy from renewable sources [2]. It sets goals for Slovakia in renewable energy in the transportation, electricity, heating and air conditioning by 2020. Thus, the plan provides for the increased use of renewable energy from 6.7% in 2005 to 14% in 2020 (as a share of gross final energy consumption).

The approved project focuses in particular the development of biomass energy. According to the Ministry of Economy, this energy could soon compete with fossil energy. "*The increased use of energy from biomass, geothermal and solar, combined with energy savings will result in reduced consumption of natural gas for heating*" said Juraj Miskov, Minister of Economy and Construction. For information, Slovakia currently uses hydroelectricity as a primary source of renewable energy. According to Slovenske Elektrarne, company responsible for the transport of electricity in Slovakia, the production capacity of electricity from hydropower is 1652.7 MW, representing approximately 31.48% of the total production capacity. [3]

EU Directive 2009/28/EC [1] aims to achieve by 2020 a 20% share of renewable energy in final energy consumption in the EU and a 10% share of this type energy consumption in each member state in the transport sector. In comparison with Slovakia, France used 18.3% of renewable energy in 2005 and has set a target of 23% by 2020. You will find a comparative table of goals set by each country at the following address [4].

*Sources: November 2010*

*- Electronic Bulletin, November 16, 2010*

*- [1] Press release webnoviny/SITA (SLOVENSKA TLACOVA AGENTURA) October 6, 2010 -*

*<http://www.webnoviny.sk/ekonomika/narodny-akcny-plan-pre-energiu-z-oz/231321-clanok.html>*

*- [2] <http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2009:140:0016:0062:fr:PDF>*

- [3] <http://www.seas.sk/power-plants/hydro-power-plants-en/>
- [4] <http://www.plateforme-biocarburants.ch/infos/eu-directive200928.php>

## 22 Spain

### 22.1 Enhanced Presence for the Spanish Science in Brussels

The High Council of Spanish Scientific Research (CSIC) has opened a new headquarters in Brussels. The facility occupies three floors and 1350 square feet of a building near the European Parliament and has received an investment of 7 million Euros to strengthen the presence of Spain in the Belgian capital.

The objective of this office is to promote the presence of researchers in European programs and the participation of the CSIC as an interlocutor in the design of future European Union strategies for Research and Development. In addition to its institutional representation in Brussels, CSIC houses its offices in 12 public research institutions and universities with which Spain has signed bilateral cooperative agreements. The Superior Council of Scientific Research has had a representative in Brussels since 1989, when the program began by providing funding for research projects.

European funds for science will almost double during the Seventh Framework Program (2007-2013) [1] with a budget of 50,000 million Euros during these 7 years. The Spanish government provides a 7% share of this investment. Funded research projects were the most competitive representing the highest quality, well-articulated science. The objective of these offices abroad is to offer guidance for scientists to better present their projects and research consortia to the EU administration.

The Delegation of CSIC in the Belgian capital moves from a single representative to a team of six professionals, in close collaboration with the European Vice-Presidency for International Relations at the Department of Space. In addition to supporting work, and managing and consulting scientists, the new delegation will collect any information on European R&D policy strategies and encourage participation in discussions on subjects such as the Council's future or the negotiations of the next proposed framework.

This new office will allow the CSIC to be on an equal footing with scientific institutions of reference in Europe such as the CNRS in France and the Max Planck Society in Germany and to foster cooperation and mutual support between these institutions.

*Sources: January 2010*

- *Electronic Bulletin, January 4, 2010*
- *Consejo Superior de Investigaciones Científicas (CSIC)* <http://www.csic.es/index.do>
- [1] *Seventh Framework Program:* <http://redirectix.bulletins-electroniques.com/XLclm>
- *Consejo Superior de Investigaciones Científicas (CSIC)* <http://www.csic.es/index.do>

### 22.2 GEOSTAR: an underwater laboratory warning tsunamis (Spain)

A team of the CSIC [1] has put in place at 3,300 meters deep and 60 miles from Cape St. Vincent, the first underwater laboratory in Europe for the detection and prevention of tsunamis: the GEOSTAR laboratory. Located in the Gulf of Cadiz, a known seismic zone (at the junction of tectonic plates of Eurasia and Africa), this laboratory will allow the detection of potentially responsible for earthquakes tsunamis, both in the Iberian Peninsula and Africa North.

With three tons and five meters high, this laboratory has various sensors such as a seismometer sensors or ocean salinity and temperature of the water: and, in addition to its mission of preventing earthquake, this laboratory will also collect data to study climate change. All measures will be sent to a surface buoy which will broadcast this information in near real time via satellite to various laboratories associated with projects (i.e. the Spanish and German [2], Italian [3] and Portuguese [4] laboratories.)

GEOSTAR is part of a broader European project "European Seafloor Observatory Network" which aims to



create other submarines laboratories in the Arctic, in the Channel, the Mediterranean and Black Seas, and to be linked via fiber optic. Powered by a lithium battery GEOSTAR should be entitled to one year of independence, the year after which will determine whether this mode of power supply will be maintained or replaced by a power cable.

*Sources: January 2010*

- *Electronic Bulletin, January 4, 2010*

- [1] *Marine Unit Technology at CSIC - Pg Maritim de la Barceloneta 37-49 - 08003 Barcelone - Phone: +34 932 309 500 - <http://www.utm.csic.es/>*

- [2] *University of Applied Science in Berlin - Technische Fachhochschule Berlin - <http://www.beuth-hochschule.de>*

- [3] *National Institute of Geophysics and Vulcanology in Catania - Istituto Nazionale di Geofisica e Vulcanologia di Catania - <http://www.ingv.it/>*

- [4] *Center of Geophysics at the University of Lisboa - Centro de Geofisica da Universidade de Lisboa - <http://www.igidl.ul.pt/>*

- *El Mundo, November 16, 2009*

- *Tendencias Cientificas, November 16, 2009*

### **22.3 Spain Has Far to go in ERC Advanced Grants Competition**

In November 2008, when the first senior researchers (Advanced Grants) awards from the European Research Council (ERC) were made, Spain came in at a modest 9th place in terms of researchers selected to carry out their project in any country.

For the second round of awards, whose results were announced in mid-January by the ERC [1,2], the situation remains unchanged. With 10 projects out of a total of 236 submissions to be carried out in Spanish institutions (15% of 1584 projects submitted for all of EU), Spain remained in 9th place far behind Great Britain (58 projects), France (34), Germany (31), Switzerland (29), and Italy (15), but also behind the "small" countries such as the Netherlands (16), Sweden (12) and Israel (11).

In this program, which funds scientific projects based on excellence (up to 3.5 million Euros over five years), six of the ten selected researchers are working in Catalonia, two in Madrid, and one each in Valencia and the Basque Country. Of the three categories of eligible projects -- Physical Sciences and Engineering (5), Life Sciences (4) and Human and Social Sciences (1), Spain was in proportion to the overall average (44%, 38% and 18% respectively).

*Sources: February 2010*

*Bulletin Electronic, February 1, 2010*

[1] *Press release: [http://erc.europa.eu/pdf/Press\\_release\\_AdG-2\\_results.pdf](http://erc.europa.eu/pdf/Press_release_AdG-2_results.pdf)*

[2] *Selected countries: [http://erc.europa.eu/pdf/List\\_AdG09\\_All\\_domains\\_by\\_country.pdf](http://erc.europa.eu/pdf/List_AdG09_All_domains_by_country.pdf)*

### **22.4 2010 Budget for Science and Innovation Down 8.77% (Spain)**

We have been kept informed of the 2010 budget of the Ministry of Science and Innovation (MICINN). Last summer, rumors circulated that the state was going to decrease competitive funds by 600 million Euros (- 37%). This has triggered a wave of reactions -- what a wrong-headed and contradictory message this sends when R&D is sacrificed in the post-crisis era. This was essentially the content of many reactions.

The 2010 budget for civilian Research, Development, and Innovation finally proposed for parliamentary debate will reportedly fall to 7.9 billion Euros (-3.1% compared to 2009). The MICINN finally reporting a smaller decrease of "only" 15% of its non-financial expenditure (i.e. excluding loans) of : 2,072 billion compared to 2,439 billion in 2009.

The budget has now passed and after several debates and votes on amendments, the Socialist Party, which has only a plurality in parliament, had to accept a certain number of changes to wind up at 8.77%. The MICINN will receive in 2010 of 2,225 billion Euros to dispense, not counting loans. From the 153 million Euros so "earned" more than half (80 million) will go to the Basque Country, the political price to pay the Socialist Party for the votes of members of the Basque Nationalist Party (NIP) required for



approval of the budget, which caused many scientists to grind their teeth. CSIC, the Spanish counterpart of the French CNRS, will be particularly affected and the parliamentary debate, which will not improve its outcome as it will receive 13.6% less. Rafael Rodrigo, the President, noted that with 40% fixed costs, this will require staff reductions of 25%.

Frankly, the budget is not good and its "15%" was even criticized in the journal *Nature*. It has at least one victim in Carlos Martinez, the former head of CSIC who had accepted the post of Secretary of State for Research at the MICINN, but resigned last December following a disagreement with Ms. Garmendia, Minister.

Regarding loans that MICINN may grant, funds are available to augment these by 13.26% (3,218 billion Euros in 2010, representing 60% of the department budget). Ms. Garmendia emphasizes that overall MICINN budget is up compared to last year (3.09%), even though researchers argue that research is done with grants and not with loans. These loans are intended to aid R & D and innovation in companies and are managed by a specific MICINN department, the ITDC, the equivalent of OSEO in France (or the Small Business Administration in the U.S). See article below "The CDTI: a key player in supporting business innovation."

*Sources: February 2010*

*Bulletin Electronic, February 1, 2010*

## **22.5 CSIC, the Iberian brother of the CNRS (Spain)**

Recent Spanish science news highlighted the work of the geologist Carlota Escutia at the Instituto Andaluz de Ciencias de la Tierra, Granada, which directs the current seabed drilling in Antarctica carried aboard the vessel *JOIDES Resolution*, under the International Program of Ocean Drilling (IODP) whose purpose is the study of marine sediments. Also noted is biologist Jordi Bascompte (Estacion Biológica de Doñana, Seville) who has joined the editorial board of the renowned journal *Science*. Both Carlota Escutia and Jordi Bascompte are researchers at the Consejo Superior de Investigaciones Científicas (CSIC), the Spanish equivalent of the French CNRS. These two research organizations signed a cooperative agreement in 2004, and both came into being almost simultaneously, when at the outset of the Spanish Civil War, the new Franco government created the CSIC on November 24, 1939 exactly one month after the CNRS was created!

The CSIC is the largest IPO (Organismos Públicos de Investigación) of the seven of the Ministry of Science and Innovation (MICINN):

- Consejo Superior de Investigaciones Científicas (CSIC)
- Instituto de Salud Carlos III (ISCIII), the equivalent of INSERM (French Medical Research Institution),
- Centro de Investigaciones Energéticas, Medioambientales y Tecnológicas (CIEMAT)
- Instituto Geológico y Minero de España (IGME)
- Instituto Español de Oceanografía (IEO)
- Instituto Nacional de Investigación y Tecnología Agraria y Alimentaria (INIA)
- Instituto de Astrofísica de Canarias (IAC)

The CSIC and its 12,000 employees, including 3,100 researchers, absorbs 55% of the budget for the 7 OPI (in second place is ISCIII, with 25%). It has 77 of its own research institutes and 51 jointly run, mainly in Madrid (40), Andalusia (21) and Catalonia (18), and associated units (152 including 132 with universities) that cover most fields of research:

- Social and Human Sciences
- Biology and Biomedicine
- Natural Resources
- Agricultural Sciences
- Physical Science and Technology
- Chemical Science and Technology
- Materials Science & Technology
- Food Science and Technology

Unlike the CNRS, there is much less interaction between the CSIC and universities: the permanent or contract staff who meet in a CSIC laboratory are largely unique to the organization. The change of the legal status of the CSIC effective January 2008 made it more autonomous in regard to its political power and gave each of its institutes more direct financial resources and personnel. The result, according to many, is disappointing, because the oft-criticized red tape of the Spanish bureaucracy affects the CSIC and has clearly not diminished since it attained "Agency" status. For example, an article published recently in *El País*, entitled "*We realize*" recounted the frustrations of CSIC officials who wanted to create a knowledge transfer agency. After four years of administrative pitfalls, they have abandoned the project.

In 2008, the total budget of the CSIC was 879 million Euros. This included €622 million from the State. According to a contract each of the structures of the CSIC, starting with its institutes, are required to develop strategic plans in four years with international commissions of experts. Two hundred and forty-four million Euros are derived from contracts (competitive funds in Europe, the Spanish National Plan mentioned earlier, and contracts with companies) and 13 million from the FEDER funds. Each institution will receive an annual appropriation for its operation but its research is funded 100% through competitive grants (to cover overheads, 19% of these funds go to the headquarters in Madrid and 16% accrue to the Institutes for infrastructure).

2010 will be a difficult year for the CSIC, which will receive 13.6% less than in 2009. Rafael Rodrigo, the President, noted that with 40% of fixed costs for staff, reductions for operation will actually be 25%. Following these restrictions, Carlos Martinez, former President of CSIC who had accepted the post of secretary of state for research in the department of research and innovation, resigned last December for his disagreement with Ms. Garmendia, Minister. She says she appreciates the concerns of CSIC but notes that the agency is passing a bad year in a context of an acute crisis, and that things will get better in 2011. In the meantime, the reserve funds of the institute should be enough. Researchers are eager to believe it...

*Sources: February 2010*

*Electronic Bulletin, February 26, 2010*

## **22.6 Spain Establishes New Research Institution**

Talencieux, a new institution charged with supporting and developing research, has recently been created in Catalonia. It combines three research entities with a budget of nearly 70 million Euros for 2010 will be headed by economist Albert Castellanos.

The Public Foundation Talencieux aims to integrate and coordinate AGAUR [1], ICREA [2] and FCRI [3] in order to attract scientific talent, but also to provide financial support and better recognition of researchers. The budget of € 69.4 million will mainly focus on attracting and training scientific personnel (up to € 45.4 million), financial support for research projects (€ 10.6 million) and improving the economic and social impact of research (€ 8.9 million Euros). The foundation was a joint initiative of universities, political, and social forces that was developed under the National Pact for Research and Innovation and driven by the Government of Catalonia.

The main areas of the new structure, inspired by the Research and Innovation Plan 2010-2013, are training and attracting scientific talent, providing favorable conditions for development and stimulating research activity to provide an evaluation benchmark for scientific work. It also seeks to improve public recognition of research and its impact, and to promote knowledge transfer between academia and business.

One of the challenges of the foundation is to provide financial support for one Catalan researcher in four by 2013 (currently, only one researcher in ten receives public funding). Another goal for 2013 is to have 50% of researchers working in industry. Through Talencieux, it will also enhance the participation of Catalonia in the 7th Framework Program for Research in the European Union.

The Foundation has a team of 4,000 employees with a budget of € 1.9 million who will be responsible for selecting and evaluating researchers and research projects. The objective is to open the panel of experts

from different countries and use English as the language for applications and evaluations. Finally, the new institution will have a role to play in the dissemination of science and the promotion of training in science and technology for young people, with the aim being to increase enrollment by 25% in 4 years.

*Sources: April 2010*

- *Electronic Bulletin, March 31, 2010*

- [1] *Agència de Gestió d'Ajuts Universitaris i de Recerca (AGAUR)*

[http://www10.gencat.cat/agaur\\_web/AppJava/english/index.jsp](http://www10.gencat.cat/agaur_web/AppJava/english/index.jsp)

- [2] *Institució Catalana de Recerca i Estudis Avançats (ICREA)* <http://www.icrea.cat/web/home.aspx>

- [3] *Fundació Catalana per a la Recerca i la Innovació (FCRI)* <http://www.fcr.es/>

## **22.7 New Law of Science: Finally! (... Maybe!) (Spain)**

In February 2010, after several months of work, the 25 experts appointed by the MICINN, the Ministry of Research and Innovation, submitted to the Minister, Ms. Garmendia, their proposals to base the drafting of the preliminary proposals for a future law of science to replace the law in force since 1986. The weight ever larger of the Autonomous Communities (Spanish regions) and the European Union, the Lisbon objectives, the international competition, the key role of innovation etc. made necessary because of the opinions of all, an overhaul of the law organizing the whole policy of R&D and innovation of the Spanish State.

An editorial in the journal *Nature* on last November 12 grueling recent budgetary decisions on R&D and bluntly criticized Ms. Garmendia [1] in particular for failing to ensure that this new law announced as imminent for months and whose draft was even available on the Internet. The bad MICINN 2010 budget [2] forced last December the Secretary of State in Research of the time, Mr. Martinez Alonso, former president of the CSIC to resign. It was his replacement, Felipe Pétriz, mathematician at the University of Zaragoza, who subsequently took over the copy and helped Ms. Garmendia presenting it on March 12 at the last cabinet meeting, before the draft whose exact title is "*An Act of Science, Technology and Innovation*" available on the website of newspaper *El País* [3].

The overall objective is to consolidate Spain as a producer of knowledge (in terms of absolute number of publications, Spain is the 9th largest in the world for a 12th place in terms of GDP and a 25th place in terms of GDP per capita) and improve the capacity to transform knowledge into innovation (Spain fishery the number of patents, for example, Spain in 2005 brought 0.4% of world triadic patents when the average EU-25 was 28.4).

For this, the law intends to address three main challenges:

- Establishing scientific careers based on merit and stability, predictability and attractive to the best,
- Improve the efficiency and effectiveness of the R&D
- Changing the production model based not on the real estate or tourism, but the value added of knowledge and sustainable development.

These three points would be led respectively by:

- Elimination of thesis grants replaced by a CSD. After the doctorate, a system of CDI reviewable after 3 and 5 years should lead to tenure as bureaucratization,
- Creation of a type ANR-agency, the Agencia Estatal de Investigación. This new entity will fund R&D while the ITDC, the equivalent of OSEO in France, will continue to fund innovation,
- Improving connections between the public R&D and business fabric.

They also fall in this draft instrument of coordination of research policies of various Spanish regions: in the context of a quasi-federal Spain, this coordination is particularly needed. We may also note the dedication to promoting the role of women, development assistance, and popularization of science or the consideration of ethics.

On February 26th, the journal *Science* echoed a call for a collective of young Spanish scientists. In this paper [4], the signatories denounced the lack of posts, insecure young doctoral students pay, lack of recruitment planning, systems selection and promotion, etc. This new law is very positive to them. The

two main trade unions, UGT and CO, for their part, expressed their opposition to the Commission conditionally, demanding that non-staff researchers not be forgotten and that social agents being involved in discussions.

As for researchers, the dominant tone is rather one of disappointment. The COSCE, the Confederation of Spanish Scientific Societies, which claims more than 30,000 members, issued March 11<sup>th</sup> a highly critical analysis of the law [5], citing in particular its lack of ambition, regulationist its side, its renunciation, by allowing officials to recruit the best researchers, its vagueness on some crucial points as the Agencia Estatal de Investigación. For Joan Guinovart Chairman of COSCE, "the picture is discouraging to science is currently facing a drastic reduction in its resources and a proposed law that provides no solutions to real problems."

From a formal point of view, the presentation of the draft legislation before the Council of Ministers on March 12<sup>th</sup> would not have been according to some value and therefore approval of starting the legislative process: soon a new law for science? Two years after launching the site by the new Zapatero government emerging from the elections in spring 2008, nothing is less certain...

*Sources: April 2010*

- *Electronic Bulletin, March 31, 2010*

- [1] <http://www.nature.com/nature/journal/v462/n7270/full/462137b.html>

- [2] *The MICINN 2010 budget off loans will be of 2.225 billion Euros, down 8.77% compared to 2009. The CSIC, the Spanish counterpart of the CNRS, will be particularly affected since it will be down 13.6%. Rafael Rodrigo, the President, noted that with 40% of fixed costs of personnel, the reduction for the operation will actually be 25%*

- [3] *Draft of the text (in Spanish):* <http://redirectix.bulletins-electroniques.com/lmB5K>

- [4] *Spain's Budget Neglects Research, Alvarez et al., Science 26 February 2010: 1078-1079 ; DOI : 10.1126/science.327.5969.1078-b*

- [5] [http://www.cosce.org/pdf/COSCE\\_LCyT2010.pdf](http://www.cosce.org/pdf/COSCE_LCyT2010.pdf)

- *el Pais February 23, 24 and 26, March 3, 2010,*

- *ABC, February 26, 2010,*

- *La Vanguardia, March 12, 2010*

## **22.8 Plan Innovacion 2010: to get out of the brick (Spain)**

We had the opportunity to discuss it repeatedly: Spain suffered the brunt of the crisis. Its fiscal balance moved from green to dark red within two years (a surplus of 2.2% of GDP by 2007, deficit of -11.4% in 2009), its unemployment has almost doubled in two years, peaking (18.8% in January, double the average EU-27, the second highest behind Latvia), etc.. And if because of its size, it does not run the same risk of bankruptcy as Greece, many analysts point out that all the ingredients are there.

The magnitude of the crisis is due to an Iberian version of an economy too dependent on real estate and tourism, low productivity, low technology exportation ... Everyone agrees: more than others, the Spanish economy must build a new economic model that does not rely on the brick (11% of GDP, double the European average), but on knowledge, value added innovation. For this, we need a functioning system of R&D and innovation. The very title of the Ministry Ms. Garmendia is significant: for two years, she is the head of the Department of Science and Innovation (MICINN) and the forthcoming framework law on research (see article on the subject) will be called the "Law of Science, Technology and Innovation". But this is not to say that things are progressing: Spain grew strongly in knowledge production (9<sup>th</sup> worldwide in terms of absolute numbers of publications), but has failed to improve its capacity to transfer these (Spain in 2005 brought 0.4% of world triadic patents to a European average of 28.4%).

The future law framework that we mentioned is the possibility of adapting the tools to go in the right direction but it does not exist and anyway, will not constitute a plan of action. For many commentators, Mr. Zapatero and his government seem a bit lost, multiplying the hesitation waltz. But to take or retake control of this crucial topic of innovation, MICINN, through its general secretary for innovation, Mr. Hernani and its managing director for Technology Transfer and Entrepreneurial Development, Mr. Azcorra, presented last March 11<sup>th</sup> a plan of action entitled **Plan Innovacion 2010**.

This plan is one tool of a broader strategy of MICINN, presented at the same time than the Estrategia Estatal de Innovación, E2i. With it, the main objectives set for 2015 are 40,000 new innovative companies, 6 billion Euros (1.9% of GDP) mobilized private research, a technology balance of payments (currently 20 billion deficit Euros per year). In the long term, this strategy should, in the words of MICINN, making Spain the ninth world power in innovation.

Innovacion 2010 must be the concrete action plan for the short term with its 2.6 billion Euro plan expected to create 93,000 skilled jobs and 3,900 new innovative companies. It must generate 5 billion Euros of private investment in R&D and innovation and a return of 700 million from the European Union through its various programs. For this, seven tenders will be launched from the general direction of technology transfer and business development [1]. Their goals: territorial cooperation through the infrastructure (INNOPLANTA), higher returns in Europe (INNOEUROPA) and support for technology transfer agencies (INNCIDE) but also the public-private collaboration through the creation of platforms or technology centers (INNFLUYE and INNPACTO), excellence in research and innovation in universities (INNOCAMPUS) and the stable incorporation of qualified personnel (INNCORPORA).

*Sources: April 2010*

*- Electronic Bulletin, March 31, 2010*

*- MICINN Press Release, March 11, 2010:*

## **22.9 Spanish Priorities for European Research Infrastructure**

Established in 2002 by the European Council, the European Strategy Forum for Scientific Infrastructures (ESFRI) has established a roadmap with the latest update (2008 [1]) reporting 44 projects considered priorities by the European scientific community. These major research facilities, 10 more than the previous roadmap adopted in 2006, should start operating between 2008 and 2018. Six of them are considered "started" (the rejuvenation of the synchrotron ESRF Grenoble and XFEL, the hard X-ray laser in Hamburg, for example), 11 have defined well advanced construction plans but have not collected all financing (CESSDA in social science, IAGOS in climatology or PRACE in computer engineering, for example), while nothing has started for the others. Constructions costs for half of the projects are between 100 to 500 million Euros, and even more for others, add up to billions of Euros to be found for the construction of these 44 facilities, and hundreds of millions of Euros to cover their annual operating (typically 10% of construction). One objective of ECRI 2010 [2], the 6th European Conference on European Infrastructure held in Barcelona on March 23 - 24, under the Spanish Presidency of the European Union, was to brainstorm about establishing priorities in view of so many expensive projects.

During this conference, Ms. Garmendia, Spanish Minister for Research and Innovation, noted that Spain has established priorities for 25 among the 44 projects ESFRI [3] that she hopes that her country will support. These can be found in the document [3]. One of these, the Partnership for Advanced Computing in Europe or the PRACE project, will create a network of supercomputers. Officials at the Barcelona Supercomputing Center recently announced the addition of 100 million Euros to the project with 60 million Euros to MareIncognito, the future new Spanish supercomputer [4]. Spain will be part of the four main nodes of this network with Germany, France and Italy.

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[4] In 2005, the MareNostrum supercomputer from IBM was installed at the Polytechnic University of Catalonia. It was the first in Spain with 50 teraflops of computing power and the fourth most powerful computer in the world. Since then other supercomputers have been installed on Spanish territory: Magerit Madrid (UPM), Lapalme and Atlante in the Canaries (IAC and ULPGC), Altamira Santander (UC), Picasso Malaga (UMA), Building in Valencia (UV), Caesaraugusta Zaragoza (UZ). A total computing capacity in 2008 of 135.5 teraflops, of which 70% for the MareNostrum, increasing to 100 teraflops in 2006 and soon to go to 400. These eight machines form a supercomputing network, Red Espanola Supercomputing, managed by the BSC-CNS. Coming up, MareIncognito: A research team led by Jesús Labarta and formed by 40 researchers from IBM and BSC-CNS is working to design a new computer. The supercomputer will be capable of calculating 5 petaflops (5,000 teraflops) more than MareNostrum and yet ten times more energy efficient.

*Sources: April 2010*

*- Electronic Bulletin, April 29, 2010*

*- [1] ESFRI - "European Roadmap for Research Infrastructures, roadmap 2008" :*



[http://ftp.cordis.europa.eu/pub/esfri/docs/esfri\\_roadmap\\_update\\_2008.pdf](http://ftp.cordis.europa.eu/pub/esfri/docs/esfri_roadmap_update_2008.pdf)

- [2] ECRI 2010:

<http://www.ecri2010.es/en/category/secciones/programme>

- [3] "Spanish's strategy for involvement in scientific infrastructures and international bodies":

<http://redirectix.bulletins-electroniques.com/7YapL>

## **22.10 International Center for Cooperation on Renewable Energy (Spain)**

The Delegate Committee of the Spanish Government over Climate Change has recently approved the creation of a new International Center for Cooperation on Renewable Energy (CICER) to be based in Valencia. This center is betting on better access to renewable energy to fight against global warming. It will also make its expertise available in the context of the Millennium Development Goals (MDGs), including reducing poverty and hunger in the world and sustainable development.

The objectives of this center are to make available resources to promote the use of renewable energy in developing countries as a mean of ensuring energy self-sufficiency in collaboration with national and international agencies for development. It will also identify opportunities to develop and propose projects in collaboration with national experts. The committee also discussed the priorities proposed by Spain in the framework of various meetings of Ministers and Heads of States of the European Union and of the upcoming Summit on Climate Change to be held in Mexico City at the end of this year.

The Spanish Environment Ministry has reiterated that the fight against climate change is a fundamental pillar in the 2020 Strategy for the European Union and is also catalyst for transforming the production model in Europe.

Sources: April 2010

- Electronic Bulletin, April 29, 2010

- Spanish Ministry for Environment: <http://www.marm.es>

## **22.11 Creation of the Pyrenees-Mediterranean Cluster for Research and Higher Education (PRES) (Spain)**

On March 22, was held at the University of Girona the signing of a framework agreement between the universities of Girona, Lleida and the Balearic Islands and French universities of Perpignan and Pierre and Marie Curie (UPMC), creating a center for Research and Higher Education (PRES) for the border Pyrenees-Mediterranean. The PRES has the same name as the Euro-region Balearic Islands, Catalonia, Midi-Pyrenees and Languedoc-Roussillon. The involvement of the Parisian University is due to the Centre of Oceanology of Banyuls-sur-Mer, a mixed structure UPMC-CNRS.

The framework agreement was signed by Anna M. Geli, Rector of the University of Girona, Jean Benkhelil, President of the University of Perpignan (UPVD), Montserrat Casas, Rector of the University of the Balearic Islands, Joan Viñas, Rector of the University of Lleida and Jean-Charles Pomerol, President of the University Pierre and Marie Curie. In summary, PRES could take the form of an EGTC (European Grouping of Territorial Cooperation), legal structure created in 2007 by the EU to allow cross border entities, and other European regions, to acquire legal identity. Note that a PRES border is not new: for example, UPMC is a founding member of PRES with the University of Nice-Sophia Antipolis, Pascal Paoli in Corsica, South Toulon Var and the Italian universities of Genoa and Turin.

The ostensible goal of the PRES-Pyrenees Mediterranean is strengthening the existing bilateral institutional cooperation in this area of 80,000 students and 3,300 faculty members. The PRES should according to its founders, offer new training courses. On the research component, it should strengthen existing partnerships. Specifically, the five universities have decided to work primarily on the following issues: the marine sciences, renewable energy, sustainable development of territories, the Catalan studies, the common doctoral and masters programs.

Among the actions already developed between some partners of the new PRES are:

- A cross-border health and social hub that brings together all the formations of this area of the



universities of Girona, Lleida and Perpignan, Perpignan Hospital and the IRTS (Regional Institute of Social Work). Based in Perpignan, this cluster hosts 300-400 students. A similar pole but on the themes of elite sport and tourism is a project with the universities of Lleida, Girona and Barcelona. It could be based in Font-Romeu and dedicated for the training of athletes at high altitude.

- The project Transversalis including the Universities of Perpignan, Lleida, Girona, Barcelona, Zaragoza, Andorra and the PRES University of Toulouse. It aims at creating a platform in the field of employment and internships. It is joined by a project "Culture pro" which develops joint actions in promoting employment.

- Since late 2008, the Perpignan welcomes the House of Catalan Countries in partnership with the University of Lleida. The UPVD is also a member of the network of Joan Luis Vives Universitat, cross-border network of 20 universities, 400,000 students and 30,000 researchers. In this context, the UPVD conducts bilateral cooperation in the field of tourism and law.

- Finally, the project of the Euro-Catalan Institute cross-countries supported by the University of Perpignan is presented as a project of continuing education and advice to border development, foreshadowing the future Board for Development of the Girona Perpignan Eurodistrict. This project is sponsored by research centers of UPVD and Girona. It offers training to companies on the topics of transfer between North and South countries.

*Sources: April 2010*

- *Electronic Bulletin, April 29, 2010*

- *Press release of the University Pierre and Marie Curie March 23, 2010:*

[http://www.upmc.fr/fr/salle\\_de\\_presse/communiques/creation\\_du\\_pres\\_transfrontalier\\_pyrenees\\_mediterranee.html](http://www.upmc.fr/fr/salle_de_presse/communiques/creation_du_pres_transfrontalier_pyrenees_mediterranee.html)

## **22.12 New Rankings for Spanish Universities (Spain)**

The famous Shanghai Classification, often used to justify reform in French universities which did not rank highly, is based on a methodology criticized by many experts. The Canadian historian and sociologist of science, Yves Gingras, readily states that such a classification scheme has no scientific value [1].

This classification is not unique. At the time when internationalization, visibility, legibility and excellence are hallmarks of both Spanish and French universities, it is very important to classify and compare universities, and Spain has developed its own system.

Just before the "Selectividad" test which enables high school students to know what courses to take and which university to apply to, [3], two new classifications have been published, one referring to training (in public and private universities) and the other to research (in public universities).

### **1 – The "El Mundo" Classification**

The daily "El Mundo" analyzes 50 academic areas, noting the top five universities providing an overall ranking. The classification takes into account statistics (applications, human and material resources, curricula, dropout and success rates, number of theses, research projects, languages, conventions, etc.) but also through an anonymous survey among teachers and by examining other classifications and sources of information and/or reports (such as the ones from the ANECA agency (Agency for Evaluation), for example).

The classification did not reveal any surprises or significant changes (2008 [4], 2009 [5]) -- Madrid and Barcelona universities receive the highest marks with the first 8 places in the overall classification going to the Complutense of Madrid, the two Autónomas (independent universities), the two Politécnica, Carlos III of Madrid, the University of Barcelona and Pompeu Fabra in Barcelona. The provincial universities come next with Granada, Salamanca, La Coruna, etc. Among the private universities the University of Navarra, Ramon Llull, the Pontificia de Comillas, CEU San Pablo, Deusto stand out.

There are, of course, differences among these universities reflecting their strategic choices. For example, the autonomous Complutense ranks high in mathematics, medicine, physics, etc.; the Polytechnic and

Carlos III in telecommunications, industrial technology, and computing; Carlos III, Pompeu Fabra, Ramon Llull (Barcelona) in business administration or economics, etc. Some universities that do not rank high in the overall classification, nonetheless stand out -- Saint Jacques de Compostela in the fields of health (as well as Alfonso X), philosophy or education; Jaume I (Valencia) in translation and interpreting; Seville in art history; Alcala de Henares in environmental science; Balearic Islands, Alicante and Gerona in the field of tourism, etc.

If this classification feels more or less subjective, it reflects quite well the main activity of the major universities of Madrid and Barcelona. It may be different for some provincial universities recognized in some areas, including research, that may rank better in the University of Granada classification.

## 2 – The University of Granada Classification

Conducted by Gualberto Buela-Casal of the University of Granada, this report is published in the Spanish magazine *Psicothema* [6]. The authors carefully describe their methodology and the seven parameters they have chosen to analyze. They provide seven separate rankings and an overall classification according to a set of coefficients that they have drawn from a survey of teachers and researchers. Unfortunately, they consider only the number of articles published, rather than their impact, leaving one to wonder about the value of referring to counting thesis or the relevance of an overall ranking, but at least their work is transparent.

We give below the 7+1 rankings limited to ten public universities over a total of 48:

<b>ISI Scientific Article per Researcher</b>	<b>Teacher-researcher's Research Activity</b>	<b>R&amp;D Project per Teacher-Researcher</b>
1- Pompeu Fabra (Barcelona) 2- Miguel Hernandez (Elche) 3- Independent Barcelona 4- Rovira & Virgili (Tarragona) 5- Barcelona 6- Pablo de Olavide (Seville) 7- Independent Madrid 8- Gerona 9- Valencia Polytechnics 10- Carlos III (Madrid)	1- Carlos III 2- Independent Madrid 3- Pablo de Olavide 4- Independent Barcelona 5- Miguel Hernandez 6- Pompeu de Fabra 7- Valencia 8- Alcala 9- Rovira & Virgili 10- Balearic Islands	1- Pompeu Fabra 2- Pablo de Olavide 3- Gerona 4- Carlos III 5- Juan Carlos (Madrid) 6- Independent Barcelona 7- Lleida 8- Miguel Hernandez 9- Balearic Islands 10- Barcelona
<b>Thesis per Teacher</b>	<b>Teacher-researcher's Research Activity</b>	<b>Thesis with mention per Teacher</b>
1- Independent Barcelona 2- Complutense (Madrid) 3- Pablo de Olavide (Seville) 4- Pompeu Fabra (Barcelona) 5- Alcala 6- Valencia Polytechnics 7- Independent Madrid 8- Barcelona 9- Miguel Hernandez (Elche) 10- Rovira & Virgili (Tarragona)	1- Pompeu Fabra (Barcelona) 2- Grenada 3- Independent Madrid 4- Barcelona 5- St J de Compostela 6- Independent Barcelona 7- Cordoue 8- Salamanca 9- Complutense 10- Valencia	1- Huelva 2- Pablo de Olavide (Seville) 3- Carlos III (Madrid) 4- La Rioja 5- Catalina Polytechnics 6- Pompeu Fabra (Barcelona) 7- Independent Barcelona 8- Grenada 9- Rovira & Virgili (Tarragona) 10- Leon
<b>Patents per Researchers</b>		<b>Overall Classification</b>
1- Valencia Polytechnics 2- La Rioja 3- Catalina Polytechnics		1- Pompeu Fabra (Barcelona) 2- Independent Barcelona 3- Pablo de Olavide (Seville)

4- Miguel Hernandez (Elche) 5- Polytechnics Madrid 6- Public of Navarre 7- Alcala 8- Independent Madrid 9- Pablo de Olavide (Seville) 10- St J de Compostela	4- Independent Madrid 5- Barcelona 6- Rovira & Virgili (Tarragona) 7- Valencia Polytechnics 8- Miguel Hernandez (Elche) 9- Carlos III (Madrid) 10- Catalina Polytechnics
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Classifications from the G. Buiela-Casal et al [3]

*Sources: June 2010*

- *Electronic Bulletin, May 31, 2010*

- [1] *Article from Yves Gingras in la Recherche, May 2009 -*

<http://www.larecherche.fr/content/recherche/article?id=25327>

- [2] *"Ten Spanish Universities the most productive in research SIR2009", Electronic Bulletin, December 2009 : <http://www.bulletins-electroniques.com/actualites/61396.htm>*

- [3] *"The entry in Spanish University", Electronic Bulletin, August 2008 : <http://www.bulletins-electroniques.com/actualites/55681.htm>*

- [4] *"Foundation CyD, Shanghai, El Mundo : Spanish Universities under the loop", Electronic Bulletin July 2008 : <http://www.bulletins-electroniques.com/actualites/55402.htm>*

- [5] *"El Mundo" 2009 : <http://www.elmundo.es/especiales/2009/05/50carreras/concertados.html>*

- [6] *Spanish version of the publication: <http://www.psicothema.com/psicothema.asp?id=3712>*

- *El Pais April 26, 2010*

- *El Mundo, Campus supplement May 5, 2010*

### **22.13 Political Science - 14 scientific challenges for Europe (Spain)**

The Spanish Presidency of the European Union, which ends in June, launched the "14 challenges for 2030". It is proposing to citizens 14 challenges facing scientists and asks them to vote for one of them. The "winner" will be on the agenda of the 27 ministers of science.

The vote ended May 31st and will no longer be possible at the time you read this article but it is always interesting to see the challenges offered and the choice of 107,309 people whom voted. Each challenge is presented and defended by a person through a video you can watch on the web site created for the occasion [1].

Here are the ones presented by Spain, 7 out of 14:

- Ferran Adrià, famous chef: that food and health be taught in school.
- Paulina Beato, economist: that electricity can be stored, especially that produced by renewable energy.
- Anna Cabré i Pla, geographer: that a public system of social protection be designed sustainable enough that it requires no increase in the population.
- Juan Ignacio Cirac, physicist, specialist in quantum optics: that quantum and relativity theories of physics be unified.
- Rafael Matesanz, father of Spanish organ donation system: that organs be substituted by artificial organs or produced from stem cells.
- Margarita Salas, biochemist [2]: that each patient has a genetic profile for developing personalized treatment he requires.
- Javier Tejada, physicist, specialist in quantum magnetism: that we can have all the robots needed to help us live better and conquer space.

Results: None of the 14 challenges really stands out. They all received between 4 and 9% of the votes except three that passed the 10%: robots presented by Javier Tejada (12%), artificial organs presented by Rafael Matesanz (13%) and storage of electricity presented by Paulino Beato (14%). A 100% Spanish podium now!

*Sources: June 2010*

- *Electronic Bulletin*, May 31, 2010
- [1] Web Site for the 14 Challenges: <http://www.reto2030.eu/>
- [2] Margarita Salas' biographical sketch:
- \* In French: [http://www.bulletins-electroniques.com/rapports/smm09\\_075.htm](http://www.bulletins-electroniques.com/rapports/smm09_075.htm)
- \* In Spanish: [http://www.bulletins-electroniques.com/rapports/smm09\\_075\\_ES.htm](http://www.bulletins-electroniques.com/rapports/smm09_075_ES.htm)
- *El Pais* April 28, 2010

#### 22.14 TALEM, the new European Associated Laboratory Franco-Spanish

Last October's two very high standard Titan transmission electron microscopes arrived at the University of Zaragoza [1]. These microscopes have since been assembled, started, and on April 10<sup>th</sup> in the presence of the President of the Aragon Region, Cristina Garmendia, Minister of Science and Innovation, came to inaugurate the Laboratory for Advanced Microscopy (LMA) where the microscopes will be the flagship [2]. The LMA managed by the Institute of Nanoscience of Aragon (INA), University of Zaragoza, is intended to be opened to the Spanish scientific community: it joined the ICTS network (Scientific-Technical Singular Facilities), in other words the great scientific instruments that Spain has spread across its territory [3].

At the same time as these wonderful probes of the infinitely small are starting to be used, an Associated European Laboratory (LEA) created between the CNRS and the University of Zaragoza, specifically between CEMES Toulouse [4] and INA [5] is beginning to operate. For four years and four more if all goes well, these two institutions will form a laboratory without walls called TALEM - the Transpyrenean Associated Laboratory for Electron Microscopy. On the topic of nanomaterials, especially of magnetic nanomaterials, the idea is to bring together the expertise of the two laboratories in the fields of advanced microscopy techniques, sample preparation and measurement of magnetic properties.

In addition to the TALEM, CNRS currently has two other LEAs with Spain:

- In chemistry, with the LTPMM created in 2006, the Transpyrenean Laboratory from the Molecule to Materials merge the CNRS and the University Paul Sabatier in Toulouse on one hand and the University of Barcelona, the Independent University of Barcelona and the CSIC on the Spanish side.
- In sociology, with the ETAPES, "Spaces and temporality of public action in Southeast Europe", renewed in 2007, which brings together the CNRS and the University of Montpellier on one side and the University of Barcelona on the other.

*Sources: June 2010*

- *Electronic Bulletin*, May 31, 2010
- [1] Article published by the *electronic Bulletin*: <http://www.bulletins-electroniques.com/actualites/60957.htm>
- [2] Spanish video of the Ceremony: <http://redirectix.bulletins-electroniques.com/PHcyA>
- [3] ICTS on the web site of the Ministry for Science and Innovation MICINN: <http://redirectix.bulletins-electroniques.com/4O6jH>
- [4] CEMES web site: <http://www.cemes.fr/>
- [5] INA web site: <http://www.unizar.es/ina/index.php>

#### 22.15 Research in Spain: "Changing Times" according to Science Careers

*Science Careers* is a journal published by *Science Magazine* in partnership with the American Association for the Advancement of Science (AAAS) to help scientists in their careers. Is Spain a country worth it for scientists? To answer this question, Alaina G. Levine conducted the investigation and published her analysis in a recent article [1]. For her, even though much remains to be done, Spain is no longer an absent or minor country in the international scientific arena thanks to the creation of dynamic regional research centers, capable of attracting foreign students and bringing back Spanish exile scientists. She wrote "*the times are changing in Spain*".

In summary, according to Levine, Spain can now be proud of top-level research centers due to regional initiatives such as the Catalan government, repeated later in the Basque Country and Madrid, in which private research institutes financed with public money could bypass civil servant hiring. The success stories are the Catalan Institute of Recerca [2] or CIC-Gune and Basque BERC. In the life sciences,

which are the focus of the Science Careers article, the research centers in question are the CRG Barcelona, CIC-bio-GUNE of Derio, the CNIO and the CNIC in Madrid. According to the journalist, in contrast to structures such as the CSIC, the Spanish counterpart of the French CNRS, where, regardless of the quality of research, everyone has the same salary and few resources, the non-civil servant status will enhance competition and allow the best researchers to shine.

As one can imagine, such an argument does not fail to generate debate as evidenced by comments on the El Pais newspaper website following the publication of the article [3]. The debate is implicit between Andreu Mas-Colell, the "father" of Catalan research centers, now General Secretary of the European Research Council and Felipe Pérez, Secretary of State for Research at the Spanish government. While the former defends selective funding to institutions as a condition of prosperity for the Spanish science, the latter wants the industry to invest more in R&D and innovation.

In these circumstances, it is not certain that the new science law expected to be adopted in the coming months settles the question. There is no agreement among those who welcome the new status of the doctorate and those who criticize it for instituting the bureaucratization of research.

*Sources: July 2010*

- *Electronic Bulletin, July 5, 2010*

- [1] "Advancing Science in Spain: Not Simply a Quixotic Quest" by Alaina G. Levine, published June 11, 2010 in Science Careers, DOI : 10.1126/science.opms.r1000090, <http://redirectix.bulletins-electroniques.com/2Q5tn>

- [2] Consultation of the Catalan research institutes:

[http://issuu.com/ondeuev/docs/cerca\\_research\\_centers\\_of\\_catalonia](http://issuu.com/ondeuev/docs/cerca_research_centers_of_catalonia)

- [3] "Elogio de 'Science' a las iniciativas científicas, especialmente en Cataluña" by Alicia Rivera, El Pais June 11, 2010 : <http://redirectix.bulletins-electroniques.com/qxnll>

## **22.16 Two Reports On R&D And Spanish Universities**

Late June, just days apart, two reports that each year makes reference were published: one from the COTEC Foundation and one from the CyD Foundation. The first is entitled "Informe 2010 de Tecnología e innovación en España". The COTEC Foundation which was created in 1996 brings together Spanish business leaders who want to promote technological innovation in their countries. It has spread in Italy and Portugal. The second report from the CyD Foundation is entitled "Informe CyD 2009" and is the sixth of its kind. This foundation Conocimiento y Desarrollo (Knowledge and Development) was also created by the business world with the aim of promoting the contribution of Spanish universities to economic and social development.

PDF versions of both documents are accessible on each Foundation web site [1, 2] (those who read Spanish will find a wealth of information).

The COTEC 2010 report over 300 pages is structured in five chapters:

- 1 - Technology and Competitiveness
- 2 - Science, Technology and Society
- 3 - Technology and Business
- 4 - Policy Implementation and Financing of Innovation
- 5 - COTEC Indicators

Chapters 1, 3, 4 are the latest data on R&D and innovation investment, jobs, publications, patents, regional and national policy support, accompanying programs, etc.. For its part, chapter 2, which dealt last year of the internationalization of research, is dedicated this year to biotechnology. As Chapter 5 gives the results of an annual survey that the foundation ran among Spanish R&D actors on their perception of the situation in their country.

Regarding the CyD report, it provides a comprehensive overview of nearly 400 pages of the Spanish university system. Its six chapters are:

- 1 - The University in Spain: Supply and Demand

- 2 - Economics of the Spanish University System
- 3 - University Graduates and Labor Market
- 4 - Research, Entrepreneurial and Business Culture
- 5 - The Role of Universities in Spain. Barometer of the Situation
- 6 - Overview of University rankings

These reports are supplemented by 31 articles written by invited experts such as Pierre Richard of the CPU on French university financing system or Gero Federkeil of the CHE ranking. The report ends with a lengthy editorial on Spanish Inquisition and its actors as well as appendix bringing together different thoughts on university-business collaboration.

*Sources: July 2010*

- *Electronic Bulletin, July 26, 2010*

- [1] Web site Foundation COTEC : <http://www.cotec.es/> ; link to document in pdf : [http://www.cotec.es/upload/actualidad/fichero\\_922\\_1970\\_1\\_1.pdf](http://www.cotec.es/upload/actualidad/fichero_922_1970_1_1.pdf)

- [2] Web site Foundation CyD : <http://www.fundacioncyd.org>

### **22.17 Spain 2011 R&D Budget Continues Downward Trend**

Researchers had feared a 30% cut but it was only 15% when approved by the parliament! The 2010 budget adopted for science and innovation was 8.77% lower than 2009. What will it be for 2011?

According to figures released at the end of September by, the Ministry of Science and Innovation (MICINN), numbers corresponding to those of the proposed budget for discussion in Parliament, the Ministry's overall budget of 5.354 billion Euros will drop of 1.65% compared to the adopted 2010 budget. As regards to the non-loan funds, the decrease is 4.04% and the public research organizations will see their allocation reduced by 6.71% due primarily to lower payroll, result of a 5% cut in salaries. Anticipating criticism, the Vice-President of the Government was keen to point out that the MICINN's budget will fall by only 7.7% compared to a reduction of 15.6% for all ministries. The explosion of the State deficit obliges the government to severe austerity. R&D is among the least troubled: -1.65% for MICINN when it will be - 8.1% for the Ministry of Education, -8.2% for the Department of Health or -23.2% for the Ministry of Foreign Affairs.

This is not likely to silence critical voices from either the scientific community or the economic world. The basic argument is clear: to prepare Spain's post-crisis, the country will need to move from a low value economy too dependent on construction and tourism. It is vital to lay the foundation for an economy based on knowledge by making the necessary efforts in R&D and innovation. However, while very important financial efforts had been made until last year, the 2011 budget is as bad as 2010 and risks compromising long term efforts.

*"It is clear that the limitation of funds for science is not the way out of crisis"* said in a recent interview, the Spanish physicist Joan Ignasi Cirac, current director of the Department of Theoretical Physics at the Max Planck Quantum Optics in Germany. In an article published in El Pais, Andreu Mas-Colell who has just returned to the University Pompeu Fabra in Barcelona teaching economics after leaving the position of General Secretary of the European Research Council warns: *"If we retreat, the effort achieved so far has been a great waste of resources."* But he also says that it is not just a question of means, an illusion that the crisis makes a return to good old times: it needs to rationalize expenditures and promote advanced research. The Severo Ochoa program of selective aid to public research centers recently announced is economically modest but far-reaching.

Rafael Rodrigo, President of the CSIC, the Spanish counterpart to the French CNRS, recognized that with a 2011 budget of 687 million Euros (-5.67% compared to 2010), his institution, which had reached almost a billion Euros in 2008, has lost 22% over three years. Already battered last year, he had to use his own funds to pursue his strategy, but those funds no longer exist. Rafael Rodrigo acknowledges that the situation will not allow new investments but he is reassuring researchers groups that they will not be affected.



The Confederation of Spanish Scientific Societies (COSCE) composed of 30,000 members, is showing other figures with a decline of -6.3% in R&D funding. The confederation has considered the total figures beyond the mere MICINN. Joan Guinovart, the chairman of the COSCE, contends that Spanish science is likely to lose the prestige that had cost so much to gain and lose scientific talent that had cost so much to attract. He does not hesitate to speak about R&D being on the verge of collapsing.

Overall, everyone agrees: Spain should continue to build on knowledge. Regarding financial resources, the crisis makes a bitter debate and there is clearly a power struggle at the beginning of the parliamentary discussion on the 2011 budget.

*Sources: October 2010*

*Electronic Bulletin, October 22, 2010*

## 22.18 Innovation in Spain's Competitiveness

Xavier Sala-i-Martin, a professor at Columbia University in the United States, economic assessor at the famous Barca football club of Barcelona, but also economics professor and supervisor of the Center for Global Competitiveness and Performance of the World Economic Forum, is the author of the annual "The Global Competitiveness Report" published since 2005 [1].

This report examines what Professor Sala-i-Martin calls the 12 pillars of competitiveness of a country, such as institutions, infrastructure, labor market, etc. The weighting of these 12 parameters, which are themselves composed of sub-parameters, results in a global ranking of 139 countries with Switzerland, Sweden, Singapore, the United States and Germany in the lead and France arriving in 15th place and Spain in 42nd. Unlike countries which do not see their position changing significantly from one year to another, Spain fell by 9 places. The global economic crisis revealed a fragility in its labor market and financial system that had no real equivalent in the so-called developed countries.

The following table compares the rankings of Spain and France for the seven criteria under the heading "Innovation", with data from last year in parenthesis.

	Spain	France
<b>Innovation</b>	42 (34)	8 (9)
<b>Research Institutions Quality</b>	43 (44)	19 (17)
<b>Enterprises investment in R&amp;D</b>	47 (39)	13 (13)
<b>Universities/Enterprises collaborations</b>	46 (49)	44 (42)
<b>Government ownership of high Technology products</b>	88 (66)	44 (37)
<b>Engineers and Scientists availability</b>	47 (37)	12 (11)
<b>Patents</b>	28 (27)	21 (18)
<b>Summary for "Innovation" criteria</b>	46 (40)	19 (18)

*Detail of the Global Competitiveness Index for the criteria "Innovation": World ranking for Spain (over 139 countries) in comparison to France [1]*

Three of the seven parameters corresponding to structural characteristics, such as quality of research institutions, capacity for collaboration between universities and industry, and the capacity to generate patents, are, not surprisingly, stable, whereas the other four are down. Apart from the availability of scientists and researchers, where it is difficult to see the reasons for the significant decrease in one year, the decline in the other three sections can be explained simply by a decrease in administrative and business budgets devoted to R&D. In view of the current situation and budgetary constraints announced for 2011, it is uncertain that the 2011-2012 Global Competitiveness Report will show an increase in economic competitiveness for Spain.

*Sources: December 2010*

*- Electronic Bulletin, December 19, 2010*

*- [1] "The Global Competitiveness Report 2010-2011":*

[http://www3.weforum.org/docs/WEF\\_GlobalCompetitivenessReport\\_2010-11.pdf](http://www3.weforum.org/docs/WEF_GlobalCompetitivenessReport_2010-11.pdf)

## 22.19 The 2009 Spanish R&D Figures

On November 16, INE, the Spanish equivalent of France's INSEE (statistics organization), published the figures for R&D in 2009 [1]. With expenditures amounting to 14.6 billion Euros, in 2009 Spain spent 1.38% of its GDP on R&D. The percentage is slightly higher than the previous year (1.35%) but in absolute terms, the GDP contracted due to the crisis, so real spending fell by 0.8%. The decrease is small but it is the first decline since 1994.

The share of corporate spending had already declined in 2008 compared to 2007 and in 2009 it decreased another 6.3%, bringing it to 51.9% of the total. The contribution of public R&D spending across all departments and universities grew by 9.5%. State budgets represented 47.1% of funding, with 43.4% from the private sector supplemented by 5.5% from foreign funds (including FP7) and 3.4 % from university funds.

It goes without saying that the Lisbon strategy objectives for the years 2000 to 2010 set by European Union countries, (including 3% of GDP devoted to R&D, of which 2/3 would be invested by the private sector), will be unreachable for Spain, as well as other EU countries. If the goals seemed to be ambitious before the crisis, they clearly are today. And the 2011 numbers of Ministry of Science and Innovation do not anticipate this new dynamic.

*Sources: December 2010*

*- Electronic Bulletin, December 19, 2010*

*- [1] Press release from the INE, November 16, 2010: [http://www.ine.es/en/prensa/np629\\_en.pdf](http://www.ine.es/en/prensa/np629_en.pdf)*

## 23 Sweden

### 23.1 Sweden Introduces College Tuition for Foreign Students

At a press conference on February 19, the Minister of Higher Education and Research, Tobias Krantz, presented more detail on the government's decision to introduce tuition fees for foreign students from non EU countries, the European Economic Area, and Switzerland, effective with the 2011 school year. Fees will be introduced at the 1st and 2nd cycles (License and Master), though doctoral programs remain free for all.

Those who have already started their training will not be affected by this measure until the end of that training. Similarly, the reform should not affect all students from these countries: those regarded as having strong links with Sweden or who are in possession of a permanent residence permit are entitled to the same treatment as Swedish citizens.

Tuition fees are set by institutions and cover the total cost of the program. Students will have to cover these expenses in whole or part before starting the curriculum in order to obtain their visa or residence permit. The income generated will remain available to institutions. As to the speed with which the fees are introduced, it is expected that the government's financial participation in higher undergraduate education will be reduced gradually. The savings will be allocated to other investments in higher education.

To continue to attract qualified foreign students, the government has set up parallel systems of two new awards:

- 30 million crowns (SEK), managed by the Swedish Institute, will fund scholarships that cover living expenses and tuition for highly qualified students from certain developing countries.
- 60 million crowns will cover scholarships for highly qualified students from third countries, covering only tuition. These scholarships will be distributed by the schools themselves.

An important marketing effort among foreign students will promote the international quality of Swedish higher education in order to avoid a decline in enrollment as a result of this reform. This "campaign" will be the result of a joint effort between the institutions on one hand, and the Swedish Institute, financed by

the government, on the other.

Sources: March 2010

Electronic Bulletin, March 2, 2010

### **23.2 The Minister for Research and Education, Tobias Krantz, Visits Washington, DC (Sweden)**

On February 4, 2010, the Swedish Minister for Research and Education [1], Tobias Krantz, delivered a speech to the American Association for the Advancement of Science (AAAS [2]), where he discussed the current challenges and prospects of scientific cooperation between the European Union and the United States.

Krantz recalled the key role played by the United States in the world of research: *"Few countries can offer as much inspiration as the United States. And I need inspiration."* Prior to emphasizing cooperation he noted that *"Some people like to position Europe and the United States as opposed to each other, emphasizing our differences rather than our similarities. I personally think that this attitude is nonsense both politically and intellectually. In our time, cooperation between nations that have a similar vision has never been more vital."*

He concluded by reflecting on the world size and distances that are shrinking a little more every day: *"The pressure on our universities has never been greater. Decades earlier, the largest universities in Sweden competed with each other to count in their ranks the best students and researchers. Today, the universities of Harvard, Oxford and Kyoto are engaged in the same battle. If this is not positive pressure for modernization and improve, I do not know what it is!"*

Sources: March 2010

The full speech is available in English on the government website at:

<http://www.regeringen.se/sb/d/12499/a/139315>

- Electronic Bulletin, March 2, 2010

- [1] Ministry for Research and Education web site: <http://www.regeringen.se/sb/d/2063>

- [2] <http://www.aaas.org>

### **23.3 Reforming the Law on Student Financial Assistance (Sweden)**

On March 17, 2010, the government proposed to the parliament (Riksdag) to amend the law on financial aid awarded to students.

In Sweden, all students receive financial assistance to pursue higher education, regardless of the type of studies they undertake, their income, or their parents' income. This aid consists of a grant and a loan that the student agrees to repay either monthly or annually, from the moment s/he enters the labor market, and before her/his 60th birthday. The aid is managed by Centrala studiestödsnämnden (CSN - Central Commission for Scholarships and Loans). In spring 2009, the government received several proposals for amendments to the legislation from the committee for student's welfare and CSN.

Although Sweden has a very sound system of financial aid for students, the Government recognizes that this system must change and adapt constantly, and therefore decided to implement a number of reforms.

Specifically, the new law proposes to:

- Stop delays in the repayment or non-payment of loans. The government wants to give more freedom to terminate a loan to CSN and request full and immediate payment in case of default and to delay or stop the payment of aid when a student has interrupted his studies. CSN formerly was required to notify the student before they could stop payments.

- Strengthen the requirements for obtaining loans. Students without good grades must provide verifiable reasons in order to obtain renewal of financial aid from CSN. Currently, the rather subjective assessment of the ability of the student to continue his studies in the future is taken into account when making loans. In the proposed amendments, the assessment is made solely on past and current performance.

- Facilitate access to education for students with dependent sick children. According to the government, students should not have to repay their student loans during the time in which they had the burden of caring for sick children or family members, or when they were themselves ill.

- Encouraging international mobility. Today the minimum hourly rate for teaching for obtaining financial assistance is not the same for students in Sweden as it is abroad. The government wants to establish uniform rules of financial aid for study abroad (in an EU country or a member of the EEA) as for studies in Sweden. Students must attend classes at least half time over a period of at least three weeks a month.

Subject to approval by parliament, these proposals will come into force on July 1<sup>st</sup>, 2010.

*Sources: April 2010*

*Electronic Bulletin, April 6, 2010*

*CNS (Central Commission for Scholarships and Loans) web site: <http://www.csn.se>*

### **23.4 Research Funding - Greater autonomy of public research funding (Sweden)**

The government tabled the proposal to parliament "Ökade frihet för vissa som stiftelser finansierar forskning" (i.e. Greater independence for some foundations funding research). This proposal would mean less state interference in the foundations established in the 1990s from the salary funds.

Foundations concerned by this reform are: SSF (Foundation for Strategic Research), MISTRA (environmental research), Foundation for the Baltic, STINT (Foundation for the internationalization of research and universities), Foundation for the Establishment of an Industrial Environmental Economics (attached to the University of Lund), KK-Stiftelsen (Foundation for Strategic Knowledge), Vårdalstiftelsen (Foundation for Allergy Research).

*Sources: April 2010*

*Press Release from the Swedish Ministry for Education, March 9, 2010:*

*<http://www.regeringen.se/sb/d/12473/a/141135>*

*French-Swedish Association for Research (AFSR), [info@afsr.se](mailto:info@afsr.se)*

### **23.5 Increased Freedom for Swedish Universities**

Proposed legislation entitled "A university in tune with its time - greater freedom for universities and other higher education institutions (*In akademi i Tidene - Ökade för universitet och frihet högskolor*)" was filed March 31, 2010 before the Swedish parliament (Riksdag). It aims at making public institutions more autonomous in terms of internal organization and management of programs and teachers.

The government says there are three main reasons justifying this approach:

- These institutions play an essential role in the healthy development of society and must be centers of critical thinking and independent;
- Greater independence and more responsibility to higher education institution will enable them to better adapt to their own situations and thus improve the quality of their activities;
- Greater freedom of action is a sine qua non to give the institutions the means to conduct business successfully in a sector with strong international competition.

The reform aims to give more freedom in two areas:

- Internal organization: outside the council and the Vice-Chancellor, institutions will be free to organize themselves according to their needs and situations. However two principles are still required to be met: the decisions must be made by persons qualified in the subject area; and students should have the right to representation when decisions affect them.
- Teachers: Professors and teachers are a strategic resource for higher education institutions. The government hopes that the latter have more responsibilities as an employer and they can hire staff according to their needs. Schools will have the freedom to decide the qualifications of teachers they want to hire, and how promotions are awarded.

The possibility was raised that public higher education institutions come under a new organizational form of public law, an independent legal entity called "independent institution of higher education". However, this suggestion has not been incorporated into the bill.

Since the 1993 reform, schools are responsible for organizing programs and recruiting students. The government, however, establishes targets for the number of diplomas issued in certain programs. Institutions of higher education should be able to organize their programs according to student demand and the labor market and therefore the government longer sets targets for the number of diplomas awarded to 1st and 2nd cycles.

Finally, the bill amending the constitution, presented to the Parliament on February 2, 2010, has two amendments further strengthening freedom of action for higher education institutions:

- A new provision establishes the protection of freedom of research;
- The possibility for non-Swedish citizens to be appointed Vice Chancellor or a member of the board of an higher education institution.

If accepted, these proposals should be implemented in January 2011.

*Sources: May 2010*

*Electronic Bulletin, May 1<sup>st</sup>, 2010*

<http://www.sweden.gov.se/content/1/c6/14/30/93/ab3e7fc2.pdf>

### **23.6 Quality Assurance in Higher Education (Sweden)**

On March 22, 2010, the Swedish Minister for Higher Education and Research, Tobias Krantz, introduced a bill for a new national system of quality assurance in higher education that reflects the newly autonomous independent Swedish universities. The Ministry concluded that as institutions at the heart of society and largely financed by taxpayers, higher education must be evaluated regularly.

#### *Evaluation of the first and second cycles*

Programs granting undergraduate and graduate degrees will be evaluated every four years rather than every six years. The old system was based on process assessment -- how universities worked -- while the ministry expects the new system to focus on results.

The assessment is based on three components:

- Student work (memoires, dissertations)
- Self-evaluations, supported by visiting experts from outside the establishment
- Surveys of former students
- Evaluation of the third cycle

The graduate programs are not affected by this reform and continue to be evaluated by the National Agency for Higher Education (HSV).

#### *Financial Incentives*

The current system of resource allocation is based primarily on the number of students and the number of credits they earn, regardless of the quality of education. Following this new evaluation system, the government now wants to reward schools with better programs by giving them more money.

The Ministry believes that the introduction of tuition fees for foreign students (starting in 2011) should bring around 500-600 million crowns in addition to 360 million crowns already invested by the government. Much of this money will go to fund this new system of quality assurance. It is the National Agency for Higher Education (HSV) which is responsible for setting up this new rating system effective January 1<sup>st</sup>, 2011.

*Sources: May 2010*

*Electronic Bulletin, May 1, 2010*

*Communiqué de presse, ministère de l'enseignement supérieur et de la recherche :*

<http://www.regeringen.se/sb/d/12673/a/142152>



### 23.7 The future "City of Science" in Stockholm (Sweden)

The city of Stockholm stretches northward as the wastelands of Norra Station between Stockholm and Solna are expected to become a neighborhood bustling with life. As Kista [1] has done for ICT (Telephone, Computer, Information Technology and Communication), the "City of Science" (Vetenskapsstaden) [2] will soon become a focus of worldwide attention in the life sciences.



Presentation of the New Karolinska "  
Credits: NyaKarolinskaSolna

In May a contract was awarded to Skanska [3] to build and manage the New Karolinska [4] [5]. The hospital and its ultramodern twin towers at the exit of Torsgatan will be the first buildings in a neighborhood of at least 5,500 dwellings and 36,000 offices. From the Solna-Stockholm Bridge, one can already see the first signs as preparations are being made for moving the road and developing an entirely new part of the city.

"We will then move the Solna Bridge to build one of the two towers and a shopping center that will be accessible both by rail and road. Once this work done, we will continue the rest of the construction of the neighborhood" says Alexander Wolodarski, the architect of the project, who is delighted to fill all that empty space.

Several scientific companies have already moved around Norra Stationsgatan, and the Karolinska Institute [6] has already found renters (almost fifty companies) for its future premises. Yet this huge project did not start from scratch. Substantial resources are already present in this region. From Uppsala to Södertälje passing by Stockholm there are now 500 companies representing 25,000 jobs in the life sciences. The Karolinska Institute [6] is considered the fourth-ranked medical college in the world, KTH (Kungliga tekniska Högskolan, the Royal Institute of Technology School of Stockholm) [7] is at the forefront of medical technology and the University of Stockholm [8] is the first Faculty of Natural Sciences in Sweden. It represents 70,000 students and 7,000 researchers in a radius of several kilometers.

"We want to consolidate everything that revolves around life sciences. Care, education, research, and companies will meet here" says Ylva Williams, Director General Vetenskapsstaden [2], responsible for making the Norra Station area an important point on the world map. She already sees the new Karolinska Hospital nearby with research laboratories and companies transforming their research results into products for the international market.

*Sources: June 2010*

- *Electronic Bulletin, June 8, 2010*
- [1] : <http://www.kista.com>
- [2] : <http://www.stockholmsciencecity.com>
- [3] : <http://www.skanska.com>
- [4] : <http://www.nyakarolinskasolna.se>
- [5] : <http://www.solna.se/turist1/world-class-life-science/>
- [6] : <http://www.ki.se>
- [7] : <http://www.kth.se>
- [8] : <http://www.su.se>
- *Dagens Nyheter, May 09, 2010*
- <http://www.stockholmsciencecity.com>
- <http://www.nyakarolinskasolna.se>



### **23.8 The Erasmus Program Attracting New Swedish Students (Sweden)**

For the first time in ten years the number of Swedish students choosing the Erasmus Program is increasing. The International Education Exchange Office has seen an increase in departures of 12% for the year 2009-2010. In 2008-2009 a total of 2412 students used the Erasmus funding to study outside of Sweden compared to 2704 this year. The well-known Swedish universities and colleges with increased Swedish students leaving for Erasmus include Lund (360 students), Uppsala (331), Stockholm (199), Umeå (123) and Jönköping (113).

The Erasmus Program allows students to take courses in a foreign university for a period of 3, 6 or 12 months. Beneficiaries of this program receive between 200 and 500 Euros per month depending on their destination and length of stay. Students must have completed at least one academic year to qualify for this program. Swedish students are accustomed to a comfortable loan from the state and great flexibility in conducting their studies, which explains why they have tended not to choose an Erasmus. The increase is explained both by the curiosity of Swedish students and the strengthening of the International Strategy for Swedish Universities which, together with the International Educational Exchange Office, value the program.

*Sources: August/September 2010*

*Electronic Bulletin, September 3, 2010*

*Erasmus program: <http://www.programkontoret.se>*

### **23.9 The Effects of Increased Tuition on Foreign Student Registration in Swedish Universities**

Starting this fall, foreign students from outside the European Union must pay registration fees in Swedish universities. The Swedish Agency for Higher Education (Högskoleverket) has warned that the measure would result in a significant reduction in the number of overseas applications. While there were more than 90,000 students from outside the European Union in 2009-2010, the agency believes there will be no more than a hundred in 2010-2011.

Some fields will suffer from this situation and foreign students must find their own sources of funding. For these students, a year in Medicine will cost 230 000 Swedish Crowns (23,000 Euros) at the University of Lund and 180,000 (about 18,000 Euros) at Uppsala. The cost for all international students currently amounts to 600 million Crowns (about 60 million Euros).

If this measure can save money, it will have a definite impact on the profile of universities: some technical areas will be closed for lack of students, universities and colleges will receive less money for foreign students and international academic exchanges will be affected. For example, the Graduate School of Gävle's has for a number of years accommodated about 300 Chinese students annually in technical skills and has developed exchange programs with Chinese universities. The Royal Polytechnic School (KTH) also regrets that this reform will have negative financial consequences for the diversity of technical disciplines and on their reputation. KTH received up to 90,000 Crowns (about 9,000 Euros) annually for each non-European Union foreign student. The change could cost the school as much as 100 million Crowns (about 10 million Euros).

The International Education Exchange (IPK) wants to support master's level foreign students who could eventually become professionals working in Sweden.

*Sources: August/September 2010*

*- Electronic Bulletin, September 3, 2010*

*-<http://www.hsv.se>*

### **23.10 Creation of Elite Classes in Swedish Colleges**

In a press release dated 17 August, Jan Björklund, Minister of Education, said that elite classes would be launched in Swedish colleges. This experiment will be possible starting fall 2012 and will initially involve ten classes of 30 students. Teachers have the right to use tests and evaluations to select these students.

According to the Minister of Education, students have the right to receive more in-depth lessons in certain subjects. The courses will be strengthened in mathematics, natural sciences or social sciences programs (economics, civics, history). The Swedish Agency for Education (Skolverket) will be responsible for selecting these classes according to quality criteria. Municipal and private schools may be a candidate and file an application to Skolverket starting autumn 2011.

The announcement comes one month before the elections and in a context where a consensus is emerging on the need to introduce evaluation much earlier in secondary school. Currently, the Swedish pupils receive notes in the third year of secondary. The political debate has revealed that the left was generally supportive of the introduction of notes in second year of secondary while the right provides an assessment in the first year. The elite classes have already been launched in schools in 2010 and are expected to grow. The elite classes in college and high school are designed to upgrade the scientific interest selecting students likely to pursue advanced studies in these fields.

*Sources: August/September 2010*

*Electronic Bulletin, September 3, 2010*

*Communiqué de presse de Jan Björklund sur les classes d'élite au collège :*

<http://www.regeringen.se/sb/d/12468/a/150578>

### **23.11 Swedish Universities International 2010 Rankings**

The Shanghai rankings of institutions of higher education, the rankings published by the British consulting firm Quacquarelli Symonds called TopUniversities, and Times Higher Education (THE) rankings, always highly anticipated but controversial, were finally released for 2010. In these three classifications, the Karolinska Institute and the universities of Lund, Stockholm and Uppsala are the top ranked Swedish institutions. In the August 2010 Shanghai rankings in there are 11 Swedish universities in the top 500, including 3 in the top 100. Sweden is thus 9th worldwide. In the TopUniversities QS 2010 ranking, 8 Swedish universities are in the top 500, including 2 in the top 100. Finally, the THE ranking made public September 17, 2010, which has increased its indicators to 13 indicators instead of 6, names 6 Swedish institutions in the top 200 institutions worldwide.

#### *Evolution of the first four Swedish institutions:*

The [Karolinska Institute](#) is leading in the Shanghai and THE rankings but is not referenced in the top 500 institutions of the QS ranking. In the Shanghai rankings it rose from 51st place in 2009 to 42nd. KI occupies the 43rd place in the THE ranking.

[Uppsala University](#) ranks second among Swedish institutions and improved its standing in Shanghai from 89th to 79th place. It was the top Swedish institution identified in the QS ranking, rising from 72nd to 62nd place in 2010. Finally, it ranks fourth in the Times Higher Education ranking.

The [University of Lund](#) is in 4th place among Swedish institutions in the Shanghai ranking, although it is not in the top 100. It is the second Swedish establishment in the other two rankings although it fell from the 67th to the 72nd place in the QS ranking.

Finally, [Stockholm University](#) is the third Swedish institution in the Shanghai ranking (up from 88th to 79th place) and the Times Higher Education (129th place) and gets the 4th place for Swedish institutions in the QS ranking (moving from 215th place to 168th overall).

Note that Chalmers and Göteborg University (GU) are absent from the top rankings this year. Although they were ranked 198th and 185th respectively in the THE last year, Chalmers and GU are not among the first 200 institutions worldwide in 2010.

Phil Baty, editor at the [Dagens Nyheter](#) said in the Thursday, September 16, edition: "Sweden is a strong nation in the field of higher education and has the advantage of being a country that has attracts enough international students from other countries. While countries like France for example, suffer from structural problems, lack of funding, and elitist systems. Sweden should be very proud of its results. "

*Sources: October 2010*

- *Electronic Bulletin, October 13, 2010*
- <http://www.arwu.org>
- <http://www.topuniversities.com>
- <http://www.timeshighereducation.co.uk>
- *"Svensk utbildning får högsta betyg" DN, torsdag 16 2010*

### **23.12 Strengthening of Franco-Swedish Cooperation**

Valerie Pécresse (French Minister for Higher Education and Research) and Peter Honeth (Swedish State Secretary for Higher Education and Research) signed an agreement to develop Swedish-French cooperation in the field of neutron science, technology accelerators and climate research. This cooperation comes ahead of the proposed European Spallation Source (ESS), which aims to provide Europe with the world's most powerful neutron source and allow a unique study of matter at the atomic scale.

In this context, the French and Swedish teams will team such as:

- Updating of the ESS project definition
- The neutron research at the Laboratoire Léon Brillouin (LLB)
- The proposed development of an accelerator for the ESS, including the management and monitoring will be provided by a Franco-Swedish committee
- Research on climate at the Sciences Laboratory of Climate and the Environment through the participation of the Swedish Atmospheric Center ICOS
- Collaboration in research and development of instruments on the French synchrotron Soleil, a tool for exploring the microscopic structure of inert materials or living matter, and study their physical, mechanical, chemical or biological.

The agreement also allows Swedish students to access the French reactors training and demonstration (ISIS reactor irradiation technology) and MINERVA (neutron reactor studies). Similarly, Swedish researchers and doctoral students will access to the French research equipment under joint development projects on research reactors in France.

For both ministers, this agreement is another step intensifying the cooperation between France and Sweden. In particular, it pursued the participation of France to the proposed European Spallation Source (ESS) and the decision of Sweden, in June 2009, to remain in the Ariane program, at the request of France. Sweden has agreed to three programs in the field of space transportation: ARTA, FLPP (Future Launcher Preparatory Program) and Ariane-5 ECA.

During the interview, the French minister reiterated France's commitment to the support and expertise of Sweden as it considers it necessary to the success of the Ariane launcher on the world space market as well as to the credibility of European space policy.

*Sources: October 2010*

- *Electronic Bulletin, October 13, 2010*

### **23.13 Sweden to Upgrade High School Technology Clusters**

In May 2008 a report entitled "*Sweden needs engineers*" concluded that it was essential to strengthen the attractiveness of technology clusters in high school. This report shows that the majority of students choosing engineering courses at the university level did not come from a "technological background" (18%) but from the "natural sciences" (69%).

As a result, the Swedish government has decided to establish a four year technological education path in high schools (instead of three) of the type that existed until the early 90s. The objective is to give students skills enabling them to enter the workforce directly after high school. "*The industries and IT companies have a great demand for qualified people who may not have studied at the university*" said Lotta Edholm, responsible for Education at the City Hall of Stockholm Metro, in a newspaper article published October 19<sup>th</sup>, 2010.

This initiative is being tested this academic year in two schools in Stockholm, Bromma Gymnasium and Thoridsplans Gymnasium, with a total of 64 seats.

*Sources: November 2010*

*- Electronic Bulletin, November 8, 2010*

*- Article published in Metro October 19, 2010: Stockholm inför 4 årigt gymnasium för ingenjörer*

### **23.14 There is no age limit to defend a thesis in Sweden**

October 18, at Göteborg University (GU), Birgitta Håfors defended her thesis at the age of 75. Working within the Conservation Department (<http://www.conservation.gu.se>), her thesis assesses the different methods of preservation of the warship Vasa, in particular wooden objects, over the period of 1962 and 1979 when the first conservation methods were applied.

After spending her entire career as a chemist on the conservation of the Vasa, Birgitta Håfors ended it in presenting a thesis that examines the use of polyethylene glycol (PEG) as "preservative". The study of the preservation of the warship Vasa, which sank in Stockholm during its maiden voyage in 1628, refloated and extraordinarily well-preserved in April 1961, and is visible today in a museum in the capital of Sweden retained much international attention. The Vasa Museum is the national museum with the highest number of visitors.

Birgitta Håfors hopes that the maintenance of the Vasa keeps a high profile and becomes a source of inspiration and guidance for other efforts to stabilize archaeological waterlogged wood. She also hopes that her "thesis is a way to preserve the experience."

*Sources: November 2010*

*- Electronic Bulletin, November 8, 2010*

*- Press release from the University of Göteborg:*

[http://www.science.gu.se/english/News/News\\_detail/conservation-of-the-royal-warship-vasa-evaluated.cid957623](http://www.science.gu.se/english/News/News_detail/conservation-of-the-royal-warship-vasa-evaluated.cid957623)

## **24 Switzerland**

### **24.1 Eight New National Research Centers created (Switzerland)**

One of the main instruments for supporting research in the Confederation of the Swiss National Fund for Scientific Research (SNF) is the Research Centers Program, which integrates research teams from all over Switzerland. Funded at ten million Euros over four years, the centers are largely supported by federal grants with the budget fixed by the Parliament.

On April 15, Didier Burkhalter, Federal Counselor and Minister of Research, announced the launch of eight new centers for the period 2010-2013, which the federal government will fund up to 20 million € per year.

*The eight new centers are:*

*- **TransCure*** - which will study the structures of protein-membrane (transport proteins and ion channels) from a medical and pharmaceutical industries. Directed by Dr. Matthias Hediger from the University of Bern, the center combines research groups from the universities of Lausanne and Zurich, the Ecole Polytechnique Fédérale de Zurich and the Laboratory of Experimental Oncology of Bellinzona. The federal contribution is €9.9 million.

*- **Chemical Biology***, run jointly by the University of Geneva (laboratory of Professor Howard Riezmann) and the Ecole Polytechnique Fédérale de Lausanne, to which the federal government is contributing up to € 9.3 million, will cover development of new chemical approaches for visualization, quantification, and manipulation of biochemical processes in living cells. The Universities of Bern and Basel also participate

in the center.

- *Lives - Overcoming Vulnerability: A Life Course Perspective*, will consider and analyze the entire course of an individual's life, specifically the crises which the individual is exposed to. Funded by € 10.1 million from the federal funds, the center, directed by Professor Dario Spini from the University of Lausanne in conjunction with the University of Geneva, also includes the University of Bern, Institute of High Studies in Public Administration from Lausanne and the University of Applied Sciences of Western Switzerland.

- *Kidney - Control of renal homeostasis*, for which the federal contribution is €11.5 million, is devoted to the study of the physiological processes of kidney health and disease. Professor François Verrey from the University of Zurich is responsible for the center, which also includes the University of Bern, University of Fribourg and the University of Geneva.

- *Robotics*, the goal is to develop traditional technologies in the field and translate them into technologies focused on human beings. It brings together the Ecoles Polytechniques Fédérales de Lausanne (Professor Dario Floreano is responsible for the center) and de Zurich, the University of Zurich and the Dalle Molle Institute for Artificial Intelligence Research Lugano. The federal government is contributing up to €9.6 million.

- *Synaptic mechanisms of mental illnesses*, under Professor Pierre Magistretti from the Ecole Polytechnique Fédérale de Lausanne, also brings together the University of Lausanne, Centre Hospitalier Universitaire Vaudois, University of Geneva and University of Basel. The center will seek to determine the neurobiological mechanisms of psychological and cognitive problems. Its federal funding is €12.2 million.

- *Quantum Science and Technology*, which the Confederation has provided with €11.9 million, will address both fundamental questions of quantum physics and its applications, including quantum computing. Professor Klaus Ensslin of the Ecole Polytechnique Fédérale de Zurich leads the center, which is associated with the IBM research center in Rüschlikon, the University of Basel, the Ecole Polytechnique Fédérale de Lausanne and the Geneva University.

- *Science and Technology of ultrafast molecular processes (MUST)* will study the processes involved in molecular systems at the microscopic level. Funded by €12.1 million by the Confederation, the center is headed by Professor Ursula Keller of the Ecole Polytechnique Fédérale de Zurich, in conjunction with the University of Bern. Are also involved the Ecole Polytechnique Fédérale de Lausanne, the University of Zurich, the Paul Scherrer Institute, the University of Geneva and the University of Basel.

*Sources: April 2010*

*Electronic Bulletin, April 22, 2010*

*Press release from the State Secretary for Research and Education (SER), April 15, 2010 -*

<http://redirectix.bulletins-electroniques.com/KMrk0>

*- Brief description of the eight Centers on the SER web site - <http://www.sbf.admin.ch/nccr-f.htm>*

## **24.2 A new research center for energy at the Ecole Polytechnique Fédérale de Zurich (Switzerland)**

In the context of increases in electricity demand and the development of its transportation networks, the Ecole Polytechnique Fédérale de Zurich has established a research center “Energy Networks”, whose activities will cover the scientific, technological, economic and socio-political issues. The company funding the new center is composed by the Federal Office of Energy (OFEN) and the industries ABB, Alpiq, CFF, Swissgrid, ewz and Swisspower [1].

*Sources: April 2010*

*- Electronic Bulletin, April 22, 2010*

*- [1] Federal Administration release, March 22, 2010 –*

<http://www.news.admin.ch/message/index.html?lang=fr&msg-id=32344>

## **24.3 Change of director at the head of the Adolphe Merkle Institute (Switzerland)**

Following the resignation of its first director, Peter Schurtenberger, because of differences with the Board of Trustees, the Adolphe Merkle Institute (AMI), located in Freiburg has appointed head of the institution Christoph Weder, Professor of Polymers at the University of Freiburg and Acting Director of the AMI since Peter Schurtenberger's departure. AMI, a research center in the field of nanoscience, was founded in November 2007 following the donation of €70 million from the industrial Adolphe Merkle. [2]

*Sources: April 2010*

- *Electronic Bulletin, April 22, 2010*

- [2] Newspaper Le Temps, March 31, 2010 - <http://redirectix.bulletins-electroniques.com/IGe5U>

#### **24.4 Appointment of new Director of the Federal Nuclear Safety Inspection (Switzerland)**

Schmocker Ulrich, director of the Federal Nuclear Safety Inspection, Swiss authority and representative of the Confederation in all international security organizations, announced his retirement effective August 31, 2010. The Council of IFSN has appointed Hans Wanner as the new Director, currently director of the division "Waste" of IFSN. Hans Wanner has held project positions at the Agency for Nuclear Energy (AEN). He joined in 1995 the major division of the safety of nuclear installations on the basis of which was created in 2009 the IFSN. [3]

*Sources: April 2010*

- *Electronic Bulletin, April 22, 2010*

- [3] Federal Administration release, April 1, 2010 - <http://www.news.admin.ch/message/?lang=fr&msg-id=32511>

#### **24.5 Amendment to the Constitution of the Confederation on Human Research (Switzerland)**

At the federal vote of March 7, 2010, 77.2% the Swiss voters approved a modification to the constitution of the Confederation regarding research on humans. The amendment obliges the Confederation to legislate research on human beings, "insofar as the protection of human dignity and personality required". The decree also establishes four principles as a framework for subsequent legislation: "a research project can be achieved only if the person involved [...] gave an informed consent", "risks and constraints faced by persons participating in a research project should not be disproportionate to the usefulness of the project" and for those who are unable to give a consent, "a research project may [...] be undertaken only if equivalent results cannot be obtained from persons capable of understanding". Any research project is subject to the opinion of an independent expert to ensure the protection of individuals. The debate will now continue in Parliament, the draft law on research on human beings having been sent by the Federal Council, October 21, 2009. [4]

*Sources: April 2010*

- *Electronic Bulletin, April 22, 2010*

- *Federal Administration release, January 13, 2010 -*

<http://www.news.admin.ch/message/index.html?lang=fr&msg-id=31029>

- [4] Result of the federal vote on March 7, 2010 -

<http://www.admin.ch/ch/f/pore/va/20100307/det548.html>

#### **24.6 Switzerland European Leader in Innovation**

Switzerland leads the European Innovation scoreboard (TBEI) in its ranking of Europe's most innovative countries, ahead of Sweden, Finland, Germany, United Kingdom and Denmark. France ranked eleventh. With its rich environment for venture capital, Switzerland increased its performance over the previous year, with a growth rate of 3.3%. The products from high technology, research, and intellectual property are among the areas of Swiss excellence [5] and [6].

*Sources: April 2010*

- *Electronic Bulletin, April 22, 2010*

- [5] European table of Innovation, March 17, 2010 - <http://redirectix.bulletins-electroniques.com/FjnBf>

- [6] Federal Administration release, March 17, 2010 -

<http://www.news.admin.ch/message/index.html?lang=fr&msg-id=32279>



#### **24.7 The Swiss National Science Foundation to Focus on Young and Female Researchers**

Sources: May 2010

Full article available at:

<http://www.snf.ch/E/media/pressreleases/Pages/2010.aspx?NEWSID=1492&WEBID=07794419-B598-488E-AC2D-84F3655EFA9F>

#### **24.8 Research Careers in Europe (Switzerland)**

The Member Organization Forum on Research Careers of the European Science Foundation has published its report "Research Careers in Europe – Landscape and Horizons". Topics and recommendations in this report will be followed in the newly approved ESF MO-Forum on a "European Alliance on Research Career Development".

Sources: June 2010

Full article available at:

<http://www.snf.ch/e/current/snfinfo/policy/pages/default.aspx?NEWSID=1580&WEBID=07794419-B598-488E-AC2D-84F3655EFA9F>

#### **24.9 Swiss National Fund Investments in 2009**

In May the Swiss National Fund for Scientific Research (SNSF) released its annual report on the past year. In 2009, the SNSF invested 707 million Swiss Francs (512 million Euros) in scientific research. Sixty two percent of this amount was spent on funding projects (1 453 research projects supported), 23% to support people and 12% for directed research (national research centers and national research programs). The majority of funds (77%) are used for the remuneration of researchers (salaries and scholarships). With 38% of all funds, biology and medicine are scientific fields with the largest share, followed by natural sciences and engineering with 37% and humanities and social sciences with 25%.

Sources: August/September 2010

- SFNS press release, May 25, 2010 –

<http://www.snf.ch/f/medias/communiques/pages/2010.aspx?NEWSID=1628&WEBID=437B833D-F4BF-48B6-9AD8-8385818B5D44>

- 2009 Annual Report of the SFNS - [http://www.snf.ch/SiteCollectionDocuments/inb\\_jb\\_09\\_f.pdf](http://www.snf.ch/SiteCollectionDocuments/inb_jb_09_f.pdf)

- Electronic Bulletin, September 23, 2010

#### **24.10 Michael Graetzel Receives Millennium Technology Prize (Switzerland)**

Michael Graetzel, professor at the Ecole Polytechnique Fédérale de Lausanne (EPFL), received the 2009 Millennium Technology Prize for his work on solar cells. At low light, cells colored with special dyes have higher efficiency compared to conventional solar cells based on silicon. Their production cost is also lower. The Millennium Technology Prize, worth 800,000 Euros, has been awarded by the Technology Academy of Finland since 2004.

Sources: August/September 2010

- EPFL press release, June 9, 2010 - <http://actualites.epfl.ch/presseinfo-com?id=933>

- Electronic Bulletin, September 23, 2010

#### **24.11 New biosafety laboratories in Spiez (Switzerland)**

Switzerland has just established its first top-level biosafety research facility, allowing the study of pathogens from the groups 3 and 4, including the Ebola virus or anthrax. Located in Spiez in the Canton of Bern in federal laboratories devoted to nuclear, biological and chemical weapons, the new laboratories include two P3 and P4 units, with a total area of 200 m<sup>2</sup>, costing 28.55 million Swiss Francs (20.7 million Euros).

Sources: August/September 2010

- Confédération suisse press release, May 27 2010 (in French):

<http://www.admin.ch/aktuell/00089/?lang=fr&msg-id=33260>

- Electronic Bulletin, September 23, 2010

## 24.12 Report of R&D in Switzerland

The Federal Statistical Office (FSO) issued last June 14 its quadrennial report on expenditure on research and development in Switzerland. Compared to the previous survey dating from 2004, this report shows a strong increase of R&D, mainly through the efforts of private enterprises, a larger share of applied research, increased research abroad and a major expansion of support staff and a decrease in the number of researchers.

In 2008, investment in R&D in Switzerland amounted to 11.8 billion Euros. This represents a 24% increase compared to the previous 2004 survey (9.49 billion Euros), representing 3% of GDP for Switzerland the ratio increased slightly (2.94% in 2004). This number keeps Switzerland's sixth worldwide, behind Israel, Sweden, Finland, Japan, South Korea, ahead of France (2%), the United States and beyond the average of EU (1.8%).

The main contributors to the Swiss R&D are private companies that have invested in this sector approximately 8.7 billion Euros (an additional 24% compared to 2004), or 73.5% of the total. Followed with 24.2% of total expenditure the schools for higher education (polytechnics, universities, technical colleges), with 2.86 billion Euros, significantly higher than in 2004 (31.3%). The funding from the Confederation (direct contribution of 0.7%), and private non-profit and other companies (1.6%) remain low. Sources of funding for R&D are remarkably distinct among the main contributors. For private companies, 87% of funds for R&D are internal, while for schools for higher education, 90.6% of the amounts allocated for research come from external sources (private companies, mainly the Confederation and Cantons).

The staff support costs constitute the majority share of R&D in Switzerland with 6.3 billion Euros, accounting for 53.6% of the total. Following are expenditures for equipment with 4.75 billion Euros (40.2%). These have exploded over the period 2004-2008 (+58.6%). In terms of R&D sectors, the largest expenditures are made for experimental development (4.88 billion Euros, or 41.3% of the total) and for applied research (31.9% of the total). For private companies, these two sectors represent 91% of their investments in R&D while this share is only 20.8% for schools for higher education. These last ones focus on basic research (79.2%), a sector that has seen its overall share in Switzerland falling about 2% over the period 2004-2008.

Personnel employed in R&D have increased by 19.1% in 2008 compared to 2004, 100,164 people worked in R&D in Switzerland for a total full-time equivalent (FTE) 62,066. If the staff paid directly by the federal government stalled at 809 FTE, private companies and universities are showing a net increase of 20.4% (39,832 FTE) and 16.7% (21,425 FTE) respectively. The increase in staff over the period 2004-2008 was carried out mainly in the category of support staff (up 56%, 15,161 FTE), while the number of researchers has decreased slightly (-1%, 25,142 EFT).

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*Note: Exchange rate used: 1 EUR = 1.38 CHF*

*Sources: August/September 2010*

*Electronic Bulletin, September 23, 2010*

## 25 United Kingdom

### 25.1 The R&D picture for 2009 (United Kingdom)

Although starting on a positive note at the beginning of the year and over the following months, the British RDI (Research, Development and Innovation) ended the year a bit subdued.

Among the highlights is the continued vocal support for the importance of research and innovation as essential assets for successfully resolving the economic crisis, preparing for the future, ensuring competitive advantages to the British economy, and maintaining the continued attractiveness of leading

universities where the bulk of advanced research is conducted. In this regard the Prime Minister's speech at Oxford in February 2009 provided a particularly clear explanation of how to succeed, as was true in the various speeches of Lord Drayson, the Minister for Science and Innovation, throughout the year. Clearly, the research budget must be protected. Equally important is the high ranking of UK universities, four of which are among the world's top ten and 18 are among the top 100 as ranked by Times Higher Education, a recognized reference source. This reflects the importance attached by the government to university funding, which has doubled in a decade the appropriations to higher education and research. These universities are now the 2nd choice for students around the world who decide to pursue their higher education outside their country of origin. Finally, British universities and laboratories have again shown their strength by having four of the nine Nobel laureates in science in 2009.

It was a very good year for the space program, with strong British involvement, under the leadership of Cardiff University and the Rutherford Appleton Laboratory, in the construction of instruments and the receipt and analysis of data from the Herschel and Planck observatories aimed at understanding the earliest moments of our universe and launched in May by the ESA. Also of interest was the opening of an ESA center dedicated to exploration and robotics at the Harwell Science and Innovation Campus in July and the announcement by Lord Drayson in December of the conversion of the BNSC into a fully functioning National Space Agency.

But the economic situation in early 2010 calls for caution about the robustness of research funding in the coming years. Indeed, the UK is the only country in the G7 still in recession, with growth of less than 6% in six quarters, a deficit of 13% of GDP and unemployment reaching 3.5 million by the end of 2010. It is reasonable to ask whether the response to these socio-economic priorities the government gives in a general election year would allow for the protection of the academic R&D. Some signs show clearly that this may be difficult, the Pre-Budget for 2010-11, presented in December, announced a cut of 600 million pounds for "efficiency gains" in higher education and research in addition to a decrease of 135 million for universities, particularly affecting capital spending. Lord Mandelson also suggesting a reduction of some university courses from three to two years, in the name of "teaching efficiency". These cuts are made with high motives, promising that excellence in research and the attractiveness flagship universities will not be affected.

We take this opportunity to present our best wishes to "Science and Technology in the United Kingdom" for 2010.

*Sources: January 2010*

*Electronic Bulletin, January 21, 2010*

## **25.2 GMOs in the United Kingdom**

In the summer of 2009, the Council of State annulled a 2007 decree which would transform the European directive of 2001 on genetically modified organisms (GMOs), we wished to study the situation in the United Kingdom where an important debate has been ongoing for a decade.

This case presents an overview of the subject, treating plants, animals and microorganisms and addressing the new multidisciplinary field of synthetic biology. After establishing an agreed definition of GMOs and synthetic biology, and techniques related to them, this report will present and clarify to all stakeholders the rules under which the British government funding is allocated for such research and the state of research in the country.

Authors: Claire MOUCHOT

Embassy of France in the United Kingdom - 13 pages – December 1, 2009

Download this free report in PDF format:

[http://www.bulletins-electroniques.com/rapports/smm10\\_001.htm](http://www.bulletins-electroniques.com/rapports/smm10_001.htm)

*Sources: January 2010*

*Electronic Bulletin, January 21, 2010*

### 25.3 Science and Diplomacy (United Kingdom)

In January 2010, the Royal Society published a report entitled "*New frontiers in Science Diplomacy*" that underscores the growing role of science in solving global challenges, and demonstrates the need for a new place of science in international relations and diplomacy. The conference on this subject held in London on June 1 and 2, 2009, organized by the Royal Society with the American Association for the Advancement of Science (AAAS), has provided the basis for the preparation of this landmark document marking the beginning of the 350th anniversary of the Royal Society. Highlights of the reports include:

- Strengthening of the "science" component in foreign policy by establishing scientific advisers to the Foreign Affairs Ministers, including the United States, Japan, and more recently in the United Kingdom; the strengthening, in the United Kingdom and United States, of the network of advisers and scientific attachés in major emerging countries or significant political, scientific and technical regions. For its part, the Royal Society has put diplomacy at the heart of its new science policy;
- Science in diplomacy must play a full role in response to global challenges such as climate change, food security, water resources, or energy. The contribution of science is twofold:
  - i) inform political decision-makers by using resources such as the IPCC to prepare for the Copenhagen negotiations, or national science academies of the G8 +5, which have been preparing annual reports on topics to annual meetings of the G8 since 2005;
  - ii) warn when uncertainties are present or when assumptions are wrong or uncertain.

Scientists also contribute to the preparation of strategic arms reduction talks, while others, notably the Russians, led by the Geological Survey of Canada, published in 2008 a geological atlas of the Arctic that has become the recognized reference for addressing territorial disputes in the polar zone;

- Science diplomacy's role in facilitating international cooperation for strategic priorities (ITER, LHC, ESO, ESS, etc.) or assembling research networks through cooperative agreements or response to calls for project proposals is well known. For its part, the UK holds regular meetings with high-level science and innovation experts from South Africa, Brazil, China, South Korea, India, and Russia, which provide the general framework in which to place scientific exchanges or special initiatives (UK-India Education Research Initiative, Science Bridges, etc.). The umbrella organization of British Research Councils, RCUK, now has offices in Brussels, New Delhi, Beijing and Washington;
- Finally, science diplomacy based primarily on the "soft power" of science as a means of influence, is both a national asset and a universal activity beyond national interests. It is especially used to:
  - i) facilitate the dialogue on international security (START NPT Review ...) by establishing the pre-requisite science to further negotiation;
  - ii) control the governance of international spaces (outer space, polar regions);
  - iii) enter into agreements on cooperation in science and technology;
  - iv) construct new international organizations (CERN, ESA, and ESO);
  - v) develop scholarship programs supporting international partnerships; and
  - vi) disseminate exhibitions and science festivals, notably in China and the Muslim world.

While reaffirming the importance of the contribution of science to the practice of modern diplomacy, the report provides insights to the increasing role that Anglo-Saxons seek to play.

*Sources: March 2010*

*Electronic Bulletin, March 16, 2010*

### 25.4 UK Announces Implementation Project for Large Facilities Funding

In March 2010 as part of the outcome of a wider review of the Science and Technology Facilities Council (STFC), Lord Drayson announced that from April 2011 a new arrangement will see Research Councils

UK (RCUK) working with STFC to agree the availability and support requirements for large domestic facilities (the Central Laser Facility, Diamond and ISIS).

*Sources: May 2010*

*Full article available at:*

<http://www.rcuk.ac.uk/news/100517.htm>

### **25.5 RCUK champions the people having a real impact (United Kingdom)**

Research Councils UK (RCUK) today (14 June) launches a new publication *Impacts: People and Skills* celebrating the impact people are having on the economic and social wellbeing of the UK.

*Sources: June 2010*

*Full article available at:*

<http://www.rcuk.ac.uk/news/100614.htm>

### **25.6 A Comprehensive Study On Masters And Doctorates In The United Kingdom**

A report entitled "One Step Beyond: Making the most of postgraduate education" was published in April 2010 and was drafted and coordinated by Professor Adrian Smith, general manager of Science and Research at the Department for Business, Innovation and Skills, BIS .

Over the past twelve years, the number of students pursuing their postgraduate studies increased about 36%, more than the growth in undergraduate student numbers during the same period. Thus, nearly one quarter of students in UK higher education continues their studies at the postgraduate level. Half of all international students at British universities are enrolled in Masters and/or PhD levels.

The report stresses the importance of university policy and the level of scientific study and research: indeed, such a policy is essential in relationships between universities and businesses, and in relation to employment in general. Thereby, increasing the qualification level should meet the requirements of a globalized economy, particularly in developing areas.

According to this study, the United Kingdom occupies a privileged place in research impact and productivity: the skills of graduate students and young researchers make it possible to tackle the key challenges of today and lead innovation and growth. In financial terms, the increase in the number of students in postgraduate programs has greatly benefited the British universities: in 2008-09, this represented an income of 1.5 billion Pounds. This level of education has also significant social and cultural impact by developing a culture of critical thinking and innovation. For example, Universities UK (the British equivalent of the Conference of Presidents of Universities in France) and research councils (compared to the CNRS and the ANR, French research institutions) are invited to identify and further promote economic and social value of education at the postgraduate level.

Indeed, the rate of employability of postgraduate students is high, and gives them access to management functions. The report therefore emphasizes the importance of a government incentive to promote this level of study and the potential benefits that result for the UK higher education. This policy may be based on a comprehensive survey to assess the research experience of students involved. In this regard, the needs of postgraduate students are significantly different from those undertaking an undergraduate degree, especially for international students and part-time students. It is the role of QAA (Quality Assurance Agency) to conduct such a study.

As for the duration of the studies, it varies depending on qualifications and institutions: in most cases, the Master studies last for one year, doctorates are lasting three to four years. It is suggested that funding of education and research may be more important to allow a longer period of training, for example. In addition, the period of study could include more training sessions in the areas of methodology and foreign languages.

Access to Master's and PhD degrees is also a key issue: the report highlights the issue of equal

opportunities and the availability of information to students, especially because the percentage of part-time or long-distance students. It is the role of HEFCE (Higher Education Funding Council for England) and its counterparts in Scotland or Wales, to provide comprehensive information on courses, particularly to international students.

Approximately 30% of students 'postgraduate research' and 60% of "postgraduate education" received no aid or scholarships to pay the tuition fees or financing of housing and daily life (remember that the fees can range from £ 3,000 to £ 20,000 per academic year). This is likely to fuel the debate conducted by the committee chaired by Lord Browne, whose report on the financing of education and higher education should be released next fall.

This is a crucial point: the inquiry led by Lord Browne, called the "Independent Review of Higher Education Funding and Student Finance", will review the allocation between private and public funding in UK higher education. The higher education institutions are therefore invited to specify the level of public funding for education and research.

In conclusion, a key recommendation of the report is to link public funding for Master and Doctorate's degrees to the quality of research being conducted at universities, not to bind to the overall allocation for research. If this proposal was well received by the 20 universities of the Russell Group, it is not the same for other universities.

No doubt this report contributes to discussions and decisions of the new Minister for Universities and Science, M. David Willetts.

*Sources: July 2010*

*Electronic Bulletin, July 1, 2010-07-02*

### **25.7 New Resource Offers Public Engagement Advice And Tips For Researchers (UK)**

"The Engaging Researcher" is a new publication that offers practical advice on how researchers can engage with the public. It highlights the benefits of public engagement and gives tips on how to get started. By drawing on real life examples, it is full of ideas about how to engage different audiences in a variety of ways including public lectures, workshops and festivals or working in schools. Produced by Vitae and the National Coordinating Centre for Public Engagement (NCCPE) and supported by Beacons for Public Engagement, it is yet another resource that researchers can draw on to help get the most out of their public engagement activities. The NCCPE and Beacons for Public Engagement are funded by Research Councils UK, the Funding Councils and Wellcome Trust.

*Sources: July 2010*

*A copy of the publication is available online*

*<http://www.vitae.ac.uk/researchers/169081/Researcher-booklets.html>*

*Further information - Contact: [Jane Wakefield](#), RCUK Press and Communications Manager*

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### **25.8 RCUK supports the Researcher Development Statement as a Replacement for the JSS (United Kingdom)**

Research Councils UK (RCUK) welcome the publication of the Researcher Development Statement, a reference document that sets out the knowledge, behaviors and attitudes of effective and highly skilled researchers. It will assist in supporting and promoting the enhancement of the quality of research training and the employability of early stage researchers. RCUK see the RDS as an update of, and replacement for, the RCUK Joint Skills Statement (JSS). RCUK expect the Statement to be used by research organizations when planning support and development opportunities for researchers. The recently released RCUK Statement of Expectations regarding researcher development<sup>2</sup> stated: "(the Research Councils') expectation is that the quality of skills provision and the employability of researchers are maintained and improved, through research organizations acting to maintain availability of a broad range



of career planning, training and development opportunities for Research Council funded researchers". The RDS can be used by research organizations to assess whether they meet this expectation.

The Statement can also be used by researchers and their managers and mentors to review development needs and opportunities to broaden experience during research. It is underpinned by a Researcher Development Framework which is a useful resource for researchers and their managers and mentors when considering personal and professional development. RCUK are currently exploring how the Statement will be practically referenced within training and development guidance for researchers funded through grants and fellowships.

*Sources: August/September 2010*

*RCUK web site (published on August 5<sup>th</sup>, 2010): [http://www.rcuk.ac.uk/news/100804\\_2.htm](http://www.rcuk.ac.uk/news/100804_2.htm)*

### **25.9 RCUK release findings of Review of e-Infrastructure (United Kingdom)**

Research Councils UK (RCUK) today (5 August) released the report of the Review of e-Infrastructure. The report "Delivering the UK's e-Infrastructure for research and innovation" concluded that the UK's e-Infrastructure is well developed and among the best in the world. It also recommends that further work is needed to build on this success to ensure the continued development of the UK's research base.

The Review of e-Infrastructure was commissioned in 2009 with the aim of assessing progress to date and identifying the next steps for developing the UK's e-Infrastructure further.

*Sources: August/September 2010*

*RCUK web site (published on August 5<sup>th</sup>, 2010): <http://www.rcuk.ac.uk/news/100803.htm>*

*A full copy of the Report can be found [here](#).*

### **25.10 Research Councils UK (RCUK) Already Invests in the Highest Quality Research as Judged by Peer Review**

Excellence with impact is central to the research that we fund and this is reflected in the excellence of the UK research environment. Within the UK the quality of research output is top internationally in many fields in terms of citations per paper and per pound invested. We also excel in the degree of cross disciplinary and collaborative research being carried out, the infrastructure available to researchers as well as the translation of research to the needs of society such as evidence for policy-making.

Figures quoted this morning, by Business Secretary Vince Cable, on BBC Radio 4's Today Programme misleadingly suggested that 45% of research in the UK was not of an excellent standard. The figure quoted was derived from the recent Research Assessment Exercise (RAE) which found that 87% of the research activity is of international quality with 54% being classified as either "world-leading" or "internationally excellent".

The Research Councils will continue to work together, as RCUK, to fund only the highest quality research, as judged by peer review.

Examples of Research Council funded research that have brought benefits to the UK's economy and wellbeing can be found at [www.rcuk.ac.uk/framework](http://www.rcuk.ac.uk/framework)

*Sources: August/September 2010*

### **25.11 The Future of the UK Nanotechnology Centers and Other Budgetary Measures**

During the Royal Speech on May 25<sup>th</sup>, 2010, marking the beginning of the new British legislature and detailing the program of the new coalition between Conservatives and Liberal Democrats, the Queen recalled that the British government's priority was to reduce public debt and restore economic growth. Figures released by the Office for National Statistics (ONS) last July show that the public sector net debt, expressed in percentage of GDP was 63.9% at the end of June 2010 against 57.3% in June 2009, which corresponds to £926.9 billion in June 2010 against £797.5 billion a year earlier. In this climate of austerity, most departmental budgets will be reduced from 25 to 40%, and the budget for science will be no exception.

In his speeches since his appointment as Minister for Science and Universities, David Willets has made no declaration. It seems, however, that after consultation with the leading British societies, including the Royal Society, he indicated to the Treasury (Ministry of Economy and Finance) the research areas where cuts could be made. It was during the first public debate since the May elections, at the Science and Technology Committee of the House of Commons, that David Willets announced a series of measures he intends to implement to help reduce the country debt.

### **1. Nanotechnology Centers**

When the last five nanotechnology centers opened their doors in 2006, the British Minister for Science at the time, Lord Sainsbury, said that the United Kingdom was going to develop a network of advanced infrastructure that would allow industry to exploit nanotechnology and its economic applications. Four years later, however, on July 23, 2010, David Willets announced that it was unlikely that the 24 nanotechnology centers spread across the country would still be operational in the next 18 months. It is now the responsibility of the Technology Strategy Board to consider each center on a case by case basis at the regional level.

### **2. The Regional Development Agencies**

David Willets has also expressed concern about the division of resources by region, concern that reflects the wishes of the government of coalition to abolish the Regional Development Agencies (RDAs). The RDAs were established by Labor party, directly after coming to power: the Conservatives and Liberal Democrats say they are too expensive and that their work is often duplicated. The latter suggest replacing them with new local business partnerships (LEP, Local Enterprise Partnerships), which would bring together local governments and businesses.

### **3. Basic Research and Innovation Centers**

If budget cuts are inevitable, David Willets, however, expressed his determination to protect "Blue Skies" research (very basic research for which no application is envisioned), and is planning to conduct a rigorous analysis of scientific research sectors that must be preserved to the maximum, rather than merely establishing a listing of topics called "fashionable", such as biotechnology and space. The Minister also stressed the need to strengthen links between academia and industry, suggesting that the German Fraunhofer Center of Technology and Innovation serves as a model for similar centers to be developed the United Kingdom.

### **4. Private R&D Investment**

Finally, the Minister gave some directives on the proposed budgetary measures for scientific research; he will call for increase in private investment in research and development, and stated that the department would explore the possibility of setting up tax benefits.

*Sources: August/September 2010*

*Electronic Bulletin, September 14, 2010*

*BBC News, July 23, 2010, <http://www.bbc.co.uk/news/uk-politics-10728357>*

## **25.12 The United Kingdom Concerned Over Ability to Attract Best Researchers**

Eight British Nobel Prizes sent an open letter to The Times protesting the new government position on immigration and indicating that it would prevent the best foreign scientists from working in the UK, both in academic and in industry centers. The new measures aim to reduce the number of work visas granted to foreigners from outside the EU to 24,100 for the year 2010/11.

This open letter, published October 7, 2010, highlights the growing concern of prominent scientists who want the government to change the rules for highly skilled personnel in science, research, and engineering. This could result in an adjustment in the same manner that has been done in sport, particularly for top footballers. This would have the advantage of sending a clear signal as to the priorities of the government.

The Nobel Prize winners who signed are:

- Sir Paul Nurse, Nobel Prize in Medicine and Physiology in 2001 and President of the Royal Society since December 1<sup>st</sup>, 2010;
- Sir Martin Evans, Nobel Prize in Physiology and Medicine in 2007;
- Professor Andre Geim, Nobel Prize in Physics in 2010;
- Sir Tim Hunt, Nobel Prize in Physiology and Medicine in 2001;
- Sir Harry Kroto, Nobel Prize in Chemistry in 1996;
- Konstantin Novoselov, Nobel Prize in Physics in 2010;
- Sir John Sulston, Nobel Prize in Physiology and Medicine in 2002;
- Sir John Walker, Nobel Prize in Chemistry in 1997.

This open letter notes that within British universities, 10% of the academic professors come from outside the European Union and that international cooperation is essential to the success of science. The authors emphasize the historical importance of immigration in the contribution of non-European foreign scientists as success stories for British science, either a half-century ago or in the year just ending.

Under the new rules, a person seeking a work visa must meet a number of criteria, each giving rise to a number of points. This strict point calculation is based on the type of qualification, salary offered, family conditions, etc. An applicant must collect a minimum of 75 points for a visa to be granted.

As an example, a brilliant student of Indian origin, who carried out his PhD at Cambridge, has been offered a fellowship at the same university. But his work visa was refused because his score was only 45 points. To achieve the 75 points required for the visa, his salary would have to be £ 25,000, the average doctoral annual, almost double of a doctoral fellowship in the United Kingdom.

As recently as last October, the Nobel Prize in Physics was awarded to two scientists of Russian origin working at the University of Manchester who might not have received visas under the new regulation.

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Some examples of British immigrants who received the Nobel Prizes:

- James Watson, American co-discoverer of the DNA double helix
- Hans Krebs, a biochemist born in Germany, discoverer of cellular metabolic cycle of the same name
- Sir Ernst Rutherford, physicist and chemist in New Zealand, the first to split the atom
- Max Perutz, Austrian molecular biologist who established the structure of hemoglobin
- Sydney Brenner, South African biologist whose role has been crucial in discovering the mechanism of brain development.

*Sources: November 2010*

- *Electronic Bulletin*, November 9, 2010

- *The Guardian*, October 08, 2010, <http://www.guardian.co.uk>

<http://www.guardian.co.uk/science/political-science/2010/oct/08/science-funding-crisis-science-policy>

- *The Independent*, September 25, 2010, <http://www.independent.co.uk>

<http://www.independent.co.uk/news/science/university-heads-warn-of-a-new-scientific-brain-drain-2089092.html>

- *The Times*, October 07, 2010, <http://www.thetimes.co.uk>

### **25.13 Browne's report on university funding (United Kingdom)**

The report by Lord Browne of Madingley, BP's former President, on the funding of British universities was released October 12, 2010, in preparation of policy decisions on the subject and is a first test for the coherence of the coalition between the Conservatives and Liberal Democrats. The report should be read in view of the public expenditure review and budget austerity plan announced October 20.

Browne's report, commissioned at the end of the Labor government period, made several important proposals on reforming the system of financing higher education in England and the system of student financial contribution, based on the following principles:

- Increased investment in higher education;

- More choice for students;
- Assurance that all those who have the ability to get an education do so, regardless of their financial situation;
- A government's commitment to advance the payment of costs of higher education;
- Repayment of loans based on income when entering into working life;
- Increased support for part-time students.

The report recommends the liberalization of tuition for graduate studies. The state support in the form of loans to pay tuition fees would be available up to £ 6,000. Institutions choosing to request tuition above £ 6,000 will pay a fee (initially representing 40% of expenses) which would be used to implement support measures for the quality and accessibility of the teachings.

All students may obtain a fixed rate loan of £ 3,750; students whose annual family income is below £ 25,000 would be eligible for a grant of £ 3,250. Students whose family incomes are between £ 25,000 and £ 60,000 would receive a partial grant. The advance of the State concerning tuition fees would be extended to part-time students. The eligibility for such an advance would begin at 33% of a full-time and continue for a maximum of nine years.

The report considers that these reforms would allow full-time students coming from families in the lowest quintile of the population in terms of annual income, to receive an advance on tuition than they wouldn't receive in the current system.

The total number of seats available for students should increase by 10%. Those seeking a loan, and thus access to higher education should meet a number of conditions, each expressed in number of points. The scale is set by the government each year. Students who do not obtain the required number of points would be the subject of a separate division. There would thus be increased competition in the system, and choices of students would encourage universities to improve the quality of their offering.

A new institution called the Higher Education Council (HEC) would be created, combining the functions of four existing organizations: Higher Education Funding Council for England (HEFCE), Quality Assurance Agency (QAA), Office for Fair Access (OFFA), and Office of the Independent Adjudicator (OIA), which would thus be abolished. The HEC would have the following functions:

- Investing in high priority areas and provide additional support widening participation and retention of students;
- Identify and implement measures to ensure quality;
- Supervise the widening participation;
- Regulating the system;
- Resolving conflicts between students and institutions.

An initial list of responses is available on the website of the magazine Times Higher Education:  
<http://www.timeshighereducation.co.uk>

*Sources: November 2010*

*- Electronic Bulletin, November 9, 2010*

#### **25.14 Popular science: Metro and the Royal Society (United Kingdom)**

The highly prestigious Royal Society will celebrate its 350th anniversary on November 30, 2010. This event has been anticipated throughout the year and celebrated throughout the country through an array of events honoring not only the many achievements of the Royal Society and its members, but all these pioneers, Mavericks and Geniuses who, over the centuries have helped change the way we live and our perception of the world.

The Royal Society is an intellectual society in the broadest sense of the term and is defined as "an organized group in a given disciplinary field, whose members aim to report on their work, improve the knowledge in their field, provide training and research, disseminate results of their operations, support

and promote their discipline". In its capacity as an intellectual society, the Royal Society has set up throughout the year, a succession of scientific exhibitions, conferences, specialized workshops, and even a combining festival of science and art. The ultimate goal was to facilitate interaction with the public, making science accessible and affordable to as many, and undoubtedly raising awareness and stimulating the enthusiasm for future generations of scientific disciplines.

In this context, the Royal Society has partnered with Metro, free daily paper, and published every Monday for six months, a section of a quarter-page presenting and discussing a scientific subject matter. Adapted from a Swedish concept and created in London in 1999, Metro has now 10 regional editions and is present in 33 British towns. Distributed in transit public transportation and high traffic areas daily, Metro has a readership of some 3.5 million people, thus ranking 4th of the British daily papers. Designed to be read in 20 minutes, Metro is a series of short articles dealing with main topics.

The series of articles developed in partnership between the Royal Society and Metro is called "See *Further Into ...*". All items are available at the following address:  
<http://royalsociety.org/news/metro/?from=homefeature>

*Sources: November 2010*

*Electronic Bulletin, November 9, 2010*

*Royal Society, <http://royalsociety.org/news/metro/?from=homefeature>*

#### **25.15 New Concordat for Engaging the Public with Research launched (United Kingdom)**

A new *Concordat for Engaging the Public with Research* will be launched December 7th by the UK's research funding bodies. The aim of the Concordat is to create a greater focus on and help embed public engagement with research across all disciplines in the higher education and research sectors.

David Willetts, Minister for Universities and Science said: "Engaging people with science and engineering has never been more important. In an increasingly technological world, everyone needs to understand the benefits and potential concerns around new developments which may affect us all. Science engagement can help the public become part of a national conversation on some of the big issues like climate change and renewable energy, ensuring that researchers and policy makers understand the impact of leading research."

*Sources: December 2010*

*Full article available at:*

<http://www.rcuk.ac.uk/news/101207.htm>

*Translation for these articles was provided by Carine Polliotti. If you would like additional information or background, please feel free to contact Carine at [cpolliot@nsf.gov](mailto:cpolliot@nsf.gov)*